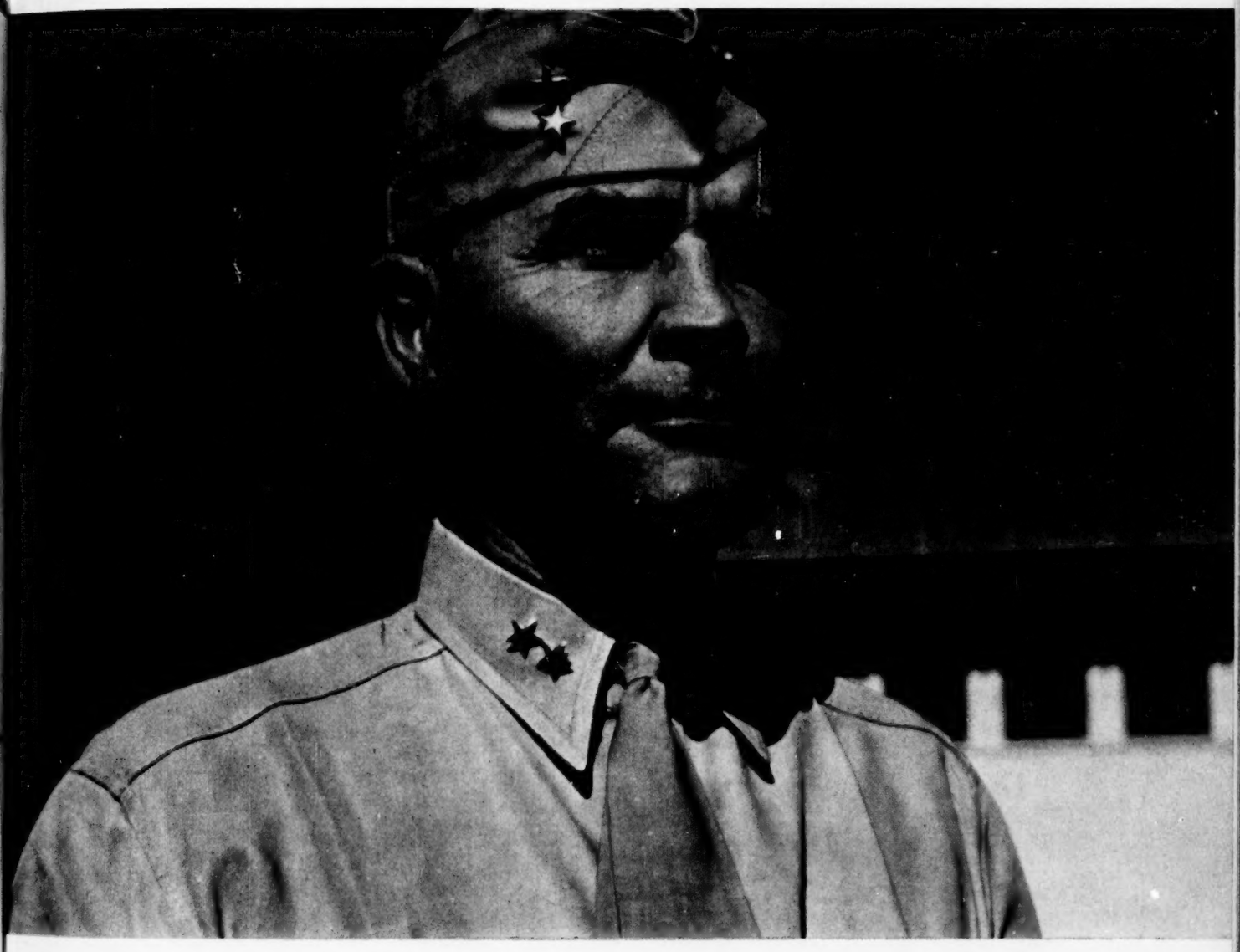
THE MARINE CORPS GAZETTE



MAJOR GENERAL
CHARLES DODSON BARRETT
USMC

They work together better . . .
because they can talk together

On the "production" front—a Federal Telephone and Radio technician "aims" her modern crystal-cutting saw.

As the sea and air barrage
Shatters the early dawn
Out plow the mine sweepers
Their night's hairtrigger work done . . .

Across their bows
Sweeps the destroyer leader
Throwing water and "making smoke" . . .

Lurking in the man-made fog
The invasion barges
Await the signal to move in
Ears glued to their radios
Like villagers' ears
To a party line . . .

Suddenly it comes
The flash that says
The coast is clear
And the whole armada
Starts moving in as one . . .

What unseen "switchboard"
Connected every radio in the fleet . . .
"Locked" each to the same wave length
To save the seconds that win battles?

It's all done *automatically*
By a tiny crystal of quartz
Cut as precisely as a precious stone.
And as carefully mounted
To form a unit that synchronizes every radio
And feeds the message through
At the predetermined frequency . . .

* * *

Today I.T.&T.'s manufacturing associate
Federal Telephone and Radio Corporation
Is one of the leading producers
Of crystal units for our fighting forces . . .

Tomorrow I.T.&T.'s broad experience
In communications
Will help men build
A better world.

INTERNATIONAL TELEPHONE AND TELEGRAPH CORPORATION *67 Broad St., New York, N. Y.*

I T&T

Manufacturing Associate:
FEDERAL TELEPHONE AND RADIO CORPORATION

"TO ENFORCE THE PEACE... TO MAINTAIN LAW AND ORDER... TO CHALLENGE THE SKILL OF THE SPORTSMEN OF THE WORLD..."

Those are the three big jobs of the Harrington & Richardson guns of tomorrow. Behind the conviction that they will do these jobs and do them well are these facts:

For 70 years Harrington & Richardson has handled the design and large-scale manufacture of shotguns and revolvers.

The many old-time craftsmen now producing H&R guns are the repositories of great skill and experience acquired in this long period.

Now much of H&R production is concentrated on the H&R Reising Submachine Gun for the armed forces —a .45 cal. rapid-fire weapon that has been called "6½ pounds of controlled dynamite." This is a mass-produced weapon of great effectiveness . . . low in cost, high in performance. As we manufacture it in ever-increasing quantity, we acquire new production skill which will inevitably be reflected in all future H&R weapons.

Then too, there are the new alloys, new plastics and other materials, as well as wartime design developments, which will be utilized to the full in postwar H&R guns.

And what, specifically, will these H&R guns be?

The present demand for H&R Submachine Guns and Semi-Automatic Rifles by police departments indicates that we shall need to continue the production of these excellent weapons long after the U. S. Marines and other military units in America and abroad have filled their requirements.

Among hand guns, there will be the famous H&R Single Shot .22, a favorite target pistol . . . retaining all the old features of superiority, and adding new ones.

The H&R Sportsman Revolver, another big favorite, will be back in improved form. And there will be more.

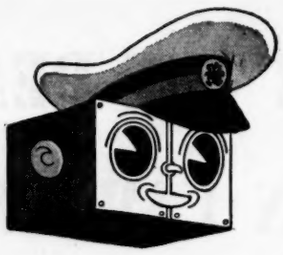
And there will be H&R rifles for sportsmen—a new departure for H&R among weapons of peace, but a natural outgrowth of our war production.

As for shotguns, many new developments are waiting at H&R for the day of Victory. They must continue to wait, for all our attention is now concentrated on winning the war. But when they do eventually come, they'll prove themselves worth waiting for.

Free on request: the Manual of the H&R Reising Gun . . . detailed, illustrated, an interesting 48-page booklet. Write Harrington & Richardson Arms Company, Worcester 2, Mass.

HARRINGTON & RICHARDSON

FINE FIREARMS FOR SPORTSMEN, POLICE AND THE MILITARY



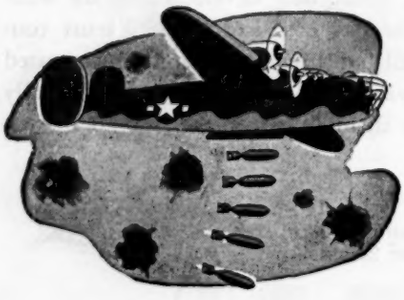
Song of Elmer...
the pilot who never gets tired

He holds no place in the Officer's Mess
for he does not sleep or eat,
He's the Quietest Birdman ever took
his place in a cockpit seat—
He joins no laughter, nor shoots the breeze,
nor whistles, nor hums, nor sings,
But he's flown more planes than any man
who ever wore pilot's wings...

...has Elmer!

He's an old, old hand, as old hands go
in a young man's game today,
For he circled the globe in 'Thirty-three
with Post in the Winnie Mae—
He's an Army man, he's a Navy man,
and he flies with the R.A.F.,
And the Yankees say, and the British say
of pilots, he's the best...

...is Elmer!



Often when bombers have levelled off
for the last tense bombing runs,
And the bomb-bay doors are opened wide,
and the gunners man the guns,
When the flak comes up as the bombs
go down, and the target zone is clear,
Then who is the pilot who holds the course
set by the bombardier...?

It's Elmer!

He can hold a plane on a chosen course
while the crewmen rest or sleep,
He can level off for a landing glide,
or bank her sharp and steep—
He can spiral up, he can spiral down,
or hold her level and true—
His hydraulic muscles never tire
the way human muscles do...

...not Elmer's!

And so bombing, transport, and cargo
planes, take Elmer on every flight
To spare the pilot and rest the crew
for emergency, storm, or fight—
He needs no rest, for he never gets tired,
being only a cold machine,
Just wheels and wires and gears and cogs,
with brackets and stuff between...

...is Elmer!

He wears no medals, he holds no rank.
Why should he? He cannot feel
The courage that flares in time of need
for he's only alloy and steel!
So when *nerve* is needed, the bombardier,
the pilots, the gunners, too,
The navigator, and all the rest,
are the boys who pull her through...

...NOT Elmer!

SPERRY

GYROSCOPE COMPANY, INC.

is proud to be manufacturing the famous Sperry Gyropilot for the Armed Forces of the United Nations.

Brooklyn, N. Y.
Division of Sperry Corporation

• *Reprints of this poem — suitable for framing, with signature removed — may be obtained without charge by writing the Sperry Gyroscope Company.*

THE MARINE CORPS GAZETTE

HEADQUARTERS, UNITED STATES MARINE CORPS

WASHINGTON 25, D. C.

VOLUME 27 — NOVEMBER, 1943 — NUMBER 7

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THE SPIRIT OF THE MARINE CORPS: 1775-1943

A 168th Anniversary Poster by Lieutenant Carl Shreve, USMC.

Our 168th Anniversary

A Message from the Commandant

ON November 10 we of the Marine Corps will pause to observe our 168th Anniversary. The day will be the same in spirit as bygone anniversaries, in that on this day we shall draw fresh confidence for the future from a proud review of the Corps' achievements of the past.

But this Anniversary has a measure of significance which no previous one has had; now at the greatest size in its history, our Corps in its 169th year faces a challenge of a scope and nature it has never faced before.

As the Allies drive forward to break through and overrun the enemy's desperate defenses, we shall continue to do our full share of the fighting. The task will grow increasingly severe, but we have not the slightest doubt of our abilities to see it through.

Our ranks today have swelled to approximately 325,000—more than four times as many Marines as fought in the heroic battles of World War I. We are now around six-and-one-half times as strong in numbers as we were on December 7, 1941.

Obviously, such sudden expansion was bound to put our training facilities under great strain. We had to go into mass production. But the basic element of Marine training has remained constant, and we are determined to keep it so. The emphasis *still* is on the *individual*. As always, each man is trained just as if the outcome of the entire war depended on *his personal success*—as indeed it does to a higher degree than he is likely to realize.

Such a program requires a maximum of time and effort, and puts the training staffs under great pressure. But they have met the test—they have kept the standards high. From our recruit depots to our most advanced training schools, they have not deviated from the traditional course of developing *every* man's abilities to the utmost.

As every Marine knows, the preparation for service is not limited to the development of technical skills. There is also the development of an *esprit de corps* to assure that our men's native and acquired fighting skills will be vitalized by an indomitable determination to win, against any odds.

That spirit springs spontaneously within each of us from our first days in the Corps throughout our years of service. New members of our ranks —125,000 have joined us since November 10 last year—will rapidly come to learn that the high regard in which their countrymen hold them stems from more than approbation of the deeds of Marines in the present war, commendable as those deeds have been.

The tradition that inspires our common pride in, and devotion to, the Corps has evolved through 168 years of Marine service in every part of the world and in every one of our country's wars.

All that Marines have done to this day—every engagement they have fought, every act of heroism they have recorded, symbolizes the soldierly virtues we strive, individually and as a team, to uphold.

The perpetuation of those qualities is not a trust limited to men in combat. Men who have yet to reach the fighting lines have the privilege and the charge of living up to them daily by conducting themselves with Marine efficiency at their posts and with Marine integrity wherever they go.

The total for Marine personnel cited above includes approximately 10,000 members of the Women's Reserve. These women are to be complimented upon the service they are doing in releasing men for combat assignments. They are worthy members of the Corps.

On this 168th Anniversary I extend my best wishes to all Marine Corps personnel. The coming year, while it promises to be the most trying of our history, will find us equal to the test.

T. HOLCOMB.

"The Spirit of the Corps"

IN this oil painting by Captain Carl James Shreve, USMC, two typical Marines are landing on a hostile beach. Confidence and irresistible fury show in their faces and actions. Thoroughly trained in the tactics of amphibious warfare, they know they will win, whatever their objective. And behind them, typifying the Marine Corps' glorious tradition of 168 years of service to our country, is the spirit of the first Marines: the drummer-boy with his drum bearing the rattlesnake and the motto: "DON'T TREAD ON ME!"

The painting is the graphic theme of the 168th Anniversary of the U. S. Marine Corps.

An Epochal Year

THE 168th year of the United States Marine Corps, ending November 10, 1943, has been without doubt the most dramatic and eventful in the history of the Corps. Never before has the pendulum of its fortunes swung through so wide an arc.

Fast-breaking events in North Africa, Italy, and Russia have tended to overshadow the theater of operations to which the Marines have been assigned. The recent crushing raid on Rabaul, the victories in New Guinea and the Central Solomons, have made many forget that only twelve short months ago the Marines on Guadalcanal, exhausted by three unrelieved months of heat, fever, and heavy fighting, were doggedly hanging on under the gathering clouds of a tremendous Japanese offensive that might have made of that place another heroic tragedy similar to Wake Island.

On November 10, 1942, the Marines were catching their breath after having virtually annihilated an entire Japanese division that had tried to drive them from Henderson Field. The Americans were hunting down the remnants of this shattered force, but to the north and west the enemy was marshalling his strength again.

American naval forces had suffered severe losses in the battle of the Santa Cruz Islands. The Japanese, also badly hurt, had retired, but seemingly were in a position in the South Pacific to hurl virtually the entire Japanese Navy against our limited strength there. The immediate future looked hazardous, indeed.

When it came, the Japanese onslaught developed as a three-group bombardment force, including battle-ships of the *Kongo* Class, heavy cruisers, light cruisers, and many destroyers. The aim was to pound the American positions on Guadalcanal to render possible the landing of tremendous reënforcements. These were embarked in 12 heavily protected transports coming in from the northwest a little later than the combat groups approaching and converging from the north and northeast.

Very early on the morning of November 13th, a United States force of cruisers and destroyers, led by Rear Admiral Daniel J. Callaghan and headed by his flagship, the heavy cruiser *San Francisco,* made contact with the Japanese combat groups virtually at their point of convergence. With hostile ships moving in from three angles, Admiral Callaghan borrowed a famous page from Lord Nelson's book and ordered his command, with the *San Francisco* in the lead, to steam the gauntlet between the two largest Jap columns with his heavy guns blazing away on both sides at point-blank range.

The daring tactic proved as good at Guadalcanal as at Trafalgar. In the darkness and confusion, the Japs fired as often at their own ships as at the Americans, while the *San Francisco* stood toe to toe with a Jap battleship and slugged it out. The battleship was so disabled that she fell easy prey to torpedoes from American destroyers and planes shortly afterward. During the furious running engagement, Admiral Callaghan, Captain Cassin Young of the *San Francisco,* and every senior officer on the bridge of the cruiser were killed by a direct hit by a Japanese shell.

As the broken Jap combat force fled toward the north it was pursued and pelted by Marine, Navy, and Army aircraft. Without carrier planes and with their antiaircraft fire power badly crippled, the Japs were easy targets for the accurate bomb and torpedo assaults of the Americans.

Late on the afternoon of November 13th, the Japanese transport group closed in on Guadalcanal from the direction of Bougainville, and its escort advanced to unleash a midnight bombardment. Toward dawn, when the transports seemed within attainment of their objective, the well-timed Marine air avalanche struck. Eight transports were sunk in quick succession and the other four dashed shoreward and were beached at Tassafaronga, a few miles west of the Marine ground positions. Discovered there the next day, they were destroyed by land, air, and naval guns. Their escort, what was left of it, had abandoned them and disappeared to the north.

In the three-day running battle the Japs had lost two battleships, six heavy cruisers, two light cruisers, six destroyers, and 12 transports sunk, and two battleships, one cruiser, and seven destroyers damaged; the United States had lost two light cruisers and seven destroyers.

The November Battle of Guadalcanal was followed by several enemy destroyer operations calculated to ease the pressure upon the doomed Japs on the island. American Air Intelligence gave warning of each of these raids, and air attacks, supplemented by the excellent work of PT boats, seriously hampered them. Henderson Field and neighboring American installations were subjected to numerous air attacks from the air field hewn by the Japs in the cocoanut groves of Munda, 180 miles northwest of Guadalcanal, but vigorous defensive fighting from Henderson Field put an exorbitant price tag on such sorties. At the same time, the growth of American air power through the Southwest Pacific was permitting broadened and intensified reprisals.

The phenomenal success of the United States Navy, Army, and Marine flyers against apparently overwhelming odds during 1942 increased proportionately as something like numerical parity was approached after the start of 1943. This stepping up of the aerial offensive not only forestalled hostile action against Guadalcanal and hastened its complete capitulation to our ground forces the first week in February, but also signalized the beginning of the end for Munda, Salamaua, and Lae, which were to fall later in the year.

The realization that the Americans were achieving definite mastery of the air, with consequent menace to the security of Japanese positions throughout the Solomons and New Guinea, moved enemy strategists after several disturbing months to endeavor to amass a flying force that would regain the driver's seat by sheer weight of numbers. On several historic occasions during June this enemy strategy was proved to be in error. On June 16, 1943, 32 Jap bombers and 45 Zero fighters were shot down with a loss of only six United States planes.

UNITED STATES Marines and soldiers landed on Rendova Island on June 30th, and this was the signal for a renewal of heavy air activity in the Solomons. Jap fighters and bombers from Ballale, Kahili, Buka Passage, and Rabaul swarmed to the defense of the Rendova garrison. Here again the "bunching" tactics of the Jap planes proved disastrous to them. In 10 days of fighting over Rendova and Munda, the Japs lost 199 aircraft against 34 American planes. Sixteen of the American pilots were rescued. On the first day of the Rendova attack alone, 101 Japs were downed. The American loss on that first day was 14 fighters and 10 pilots were picked up.

Marine flyers figured prominently in the June 30th operation, as well as in those that followed. They lived to tell of it, too. Said Major Gregory Weissenberger, USMC: "I just went around picking them off. Then one picked me off. My F4U (Corsair) burst into flames and I decided to get out. It was a lucky thing my parachute had been repacked the day before, because I jumped from under 1,000 feet."

Major Weissenberger collected three Zeros and a couple of cracked ribs for his efforts. His confrere, First Lieutenant Wilbur Thomas, USMC, of El Dorado, Kansas, bagged four Zeros without personal damage. "I kept climbing out of the fight," he related later. "Every time I tried to get height, a Zero would come up in front of my gun sights and I would let go. Every one I shot at just exploded."

As the Rendova-Munda campaign progressed through 37 days to the victorious American climax on August 6th, air hostilities continued with ferocity. During the whole campaign, 358 Jap planes were destroyed in combat, including 259 fighters, 60 twin-engine bombers, 23 dive bombers, and 16 float planes. Total United States losses in coverage of convoys and landing operations of troops, patrol over Rendova, bombing of ships and widely separated enemy bases amounted to 71 fighters and 22 bombers of all types.

Perhaps the most ambitious and effective American air blow of the entire Southwest Pacific phase of the war to date was struck on July 17th, when approximately 200 American fighters and light and heavy bombers were assembled for an onslaught on Jap shipping in the Buin-Tonolei area. While our attackers lost five planes, Japan lost nearly 50; we sank one Jap cruiser, two destroyers, two transports, and two auxiliary ships. A third transport was beached.

Scant rest awaited United States airmen after completion of their task at Munda. Exertion of climactic pressure was under way in the protracted effort of American and Australian ground forces against the important Salamaua and Lae bases on the east coast of New Guinea, and vastly augmented air onslaughts were instrumental in hastening the eradication of resistance in these sectors by the middle of September. Seizure of Arundel, immediately west of New Georgia and southeast of Kolombangara Island, followed promptly by establishment of a beachhead in the Finschhafen-Madang area on northeastern New Guinea, called for further collaboration of air, sea, and ground forces. It is plain that this is but the start of an operation much more far-reaching than anything that has gone before.

Hard-won advances of the past year through the Solomons and on New Guinea, when viewed on a map, may appear small in comparison with the magnitude of Japanese expansion during the first eight months of the war. But they are of great importance strategically; they represent the beginning of the ebb of that tremendous tide, and they have placed the United States air arm in notably improved position to deal severely and properly with vital enemy centers.

Their 168th Anniversary finds the United States Marine Corps in far better case than they were a year ago when there were serious doubts as to their chances of clinging to the narrow beachhead they had seized on Guadalcanal.

Air Rescue Service Commended

UNDER the command of Major Michael Sampas, U.S.M.C., the Air Rescue Service based on Guadalcanal returned 337 persons to United States bases during the period from April 1 to July 15, 1943. Of the total, 100 were pilots and crew members who had made crash landings or parachuted to safety, many of whom were rescued under the noses of the Japanese. Of the rest, 219 were evacuees, including Chinese, and 18 were miscellaneous passengers.

Major Sampas, who organized the air rescue service on Guadalcanal, has been commended by Admiral William F. Halsey, U.S.N., Commander South Pacific Area and South Pacific Force, as follows:

"For meritorious performance of duty while attached to the staff of the Commander Aircraft, Solomon Islands at Guadalcanal during the period from April 1 to July 25, 1943. Major Sampas, under difficult conditions, including frequent large scale enemy air attacks, set an example of courage, resourcefulness and initiative in carrying out important duties, which materially contributed to the successful conduct of offensive air operations. These duties included the collection and dissemination of data for the Air Command, liaison with units present in the area, and the organization of the air rescue service, which, in the period April 1 to July 15, 1943, returned thirty-nine pilots, sixty-one flight crew members, two hundred and nineteen evacuees, and eighteen miscellaneous passengers. Major Sampas personally flew many of these missions as pilot of the rescue airplane. His performance of duty was at all times in keeping with the highest traditions of the United States Naval Service."

Major Sampas, who was born at Lowell, Massachusetts, on July 4, 1911, joined the Marine Corps as a private on July 2, 1934. He was appointed a Second Lieutenant in the Marine Reserve a year later and received his flight training. He is a graduate of the Massachusetts Institute of Technology.

REQUIRED READING FOR ALL AMERICANS

The following poem by Noel Coward, noted British actor and playwright, was written for the U. S. Army's British edition of *Stars and Stripes*, and cabled recently from London by United Press. It is some of the best writing that has ever come from Coward's prolific pen. But it is far more than that. It is something that should be read and understood by every American, either in or out of the service. The poem itself needs no comment nor praise. But the incident that inspired it—the disparagement of our Allies and the vainglorious boasting of which some Americans are occasionally guilty—are things of which we should all be deeply ashamed.

Lines TO AN AMERICAN OFFICER

By NOEL COWARD

THESE lines are dedicated to a man
I met in Glasgow, an American.
He was an Army officer, not old,
In the late twenties. If the truth were told
A great deal younger than he thought he was.
I mention this ironically because
After we'd a drink or two he said
Something so naïve, so foolish, that I fled.
This was December nineteen forty-two.
He said: "We're here to win the war for you!"

NOW LISTEN—I'm a Britisher.
I love America and know it well.
I know its fine tradition, much of its land
From California to Maine. I know
The grand sweep of the Colorado mountain;
The sweet smell of lilac in Connecticut;
I close my eyes and see the glittering pageant of
New York
Blazing against the evening sky; I walk
In memory, along Park Avenue, over the rise
Before Grand Central Station; then Broadway
Seared by the hard, uncompromising glare
Of noon, the crowded sidewalks of Times Square
So disenchanted by the light of day
With all the sky-signs dark, before the night
Brings back the magic. Or I can wait
High on a hill above the Golden Gate
To see a ship pass through. I could recite
All the states of the Union, or at least
I think I could. I've seen the autumn flame
Along the upper Hudson. I could reclaim
So many memories. I know the East,
The West, the Middle West, the North, the wide,
Flat plains of Iowa; the South in spring,
The painted streets of Charleston echoing
Past elegance. I know with pride
The friendship of Americans, that clear, kind,
Motiveless hospitality; the warm,
Always surprising, always beguiling charm
Of being made to feel at home. I find,
And have found, all the times that I've returned,
This heartening friendliness. Now comes the war.
Not such a simple issue as before.
More than our patriotism is concerned
In this grim chaos. Everything we believe,
Everything we inherit, all our past
Yesterdays, todays, tomorrows, cast
Into the holocaust. Do not deceive
Yourself. This is no opportunity
For showing off; no moment to behave
Arrogantly. Remember, all are brave
Who fight for truth. Our hope is unity.
Do not destroy this hope with shallow words.
The future of the world is in our hands
If we remain together. All the lands
That long for freedom; all the starving herds
Of tortured Europe look to us to raise
Them from their slavery. Don't undermine
The values of our conflict with a line,
An irritating, silly, boastful phrase!

REMEMBER—I'm a Britisher.
I know my country's faults. Its rather slow
Superior assumptions; its aloof
Conviction of its destiny. The proof
Of its true quality also I know.
This lies much deeper. When we stood alone,
Besieged for one long, agonized year,
The only bulwark in our hemisphere
Defying tyranny. In this was shown
The temper of our people. Don't forget
That lonely year. It isn't lease or lend,
Or armaments, or speeches that defend
The principles of living. There's no debt
Between your land and mine except that year.
All our past errors, all our omissive sins
Must be wiped out. This war no nation wins.
Remember that, when you are over here.
Also remember that the future peace
For which we're fighting cannot be maintained
By wasting time contesting who has gained
Which victory. When all the battles cease
Then, if we've learned by mutual endurance
By dangers shared, by fighting side by side,
To understand each other, then we'll forge a pride,
Not in ourselves, but in our joint assurance
To the whole world, when all the carnage ends,
That men can still be free and still be friends.

Marine Artillery in Guadalcanal

The Story of the 11th Marines

By Brigadier General Pedro del Valle, USMC

PRIOR to leaving the training area at New River, the 11th Marines, commanded by the author, consisted of the headquarters and service batteries, special weapons batteries, the 1st, 2d, and 3d 75mm. pack howitzer Battalions, the 4th 155mm. howitzer Battalion, and the 5th 105mm. howitzer Battalion. This constituted the artillery of the First Marine Division. Shortly before the division moved, the 7th Marines was detached and with it the 1st pack howitzer Battalion, commanded by Lieutenant Colonel J. R. Knowlan. These units rejoined the division on Guadalcanal during the latter part of September after the battle of Raiders' Ridge.

The 2d Battalion (pack howitzer), commanded by Lieutenant Colonel E. G. Hagen, sailed with the first echelon of the division which embarked at an east coast port and reached our base port in the South Pacific ahead of the remainder of the regiment. The regiment, less the 1st and 2d Battalions, then proceeded overland by rail to a port of embarkation on the west coast, from which we sailed on 21 June 1942. We reached our destination, the same base port to which the first echelon had gone, early in June. On the 18th of July, Admiral R. K. Turner took command of the amphibious force, hoisting his flag on the *McCawley*. The short period we were at the base was employed in unloading the ships that brought us from the continent and, after selecting the gear which we were to take with us into combat, loading it in the navy transports which were to take us into action.

In this process, the 11th Marines were obliged to leave behind the 4th (155mm. howitzer) Battalion, commanded by Lieutenant Colonel M. E. Fuller, because of the necessity to economize on space in the limited available transport force. This left the 2d and 3d (75mm. pack howitzer) Battalions and the 5th (105mm. howitzer) Battalion to accompany the expedition to Guadalcanal. In addition to leaving behind our entire 4th Battalion, it was necessary to cut down materially on our motor transport.

After distributing the orders for the actual attack on Guadalcanal to the unit commanders, the orders for a rehearsal, which was to take place somewhere in the Fijis, was passed out complete with maps. In the embarkation plan, the artillery commander was made task group commander and several other units were placed under his orders; thus, the 1st Engineers Battalion, commanded by Major J. G. Frazer, the 1st Special Weapons Battalion, commanded by Lieutenant Colonel R. B. Luckey, and the 1st Pioneer Battalion, commanded by Lieutenant Colonel G. R. Rowan, became part of this task group. Major Frazer was given the task of organizing the land defense of the initial beachhead, Colonel Luckey was given the antiaircraft defense, and Colonel Rowan was appointed shore party commander with the duty of conducting the disembarkation.

The convoy, with its escort of cruisers and destroyers, left the base port on 24 July 1942 in the face of a gale blowing from the northeast and accompanied by a cold rain. The weather was pretty spotty until we reached the Fiji Islands on which the rehearsal was to be held. The weather fortunately became sufficiently clear for us to hold the rehearsal with a fairly easy sea and good visibility. Unfortunately, some of the features of the island selected for this rehearsal did not come up to specifications and, aside from getting the men and guns in and out of boats and proceeding toward the island in formation, the field artillery got very little benefit from it.

From the Fiji Islands, the convoy, now reinforced by other convoys containing elements of the Second Marine Division including the 2d Marines and the 1st Battalion, 10th Marines, proceeded toward its objective across the Coral Sea. In addition to the escort, which was sufficiently powerful, there was a very strong naval task covering force including battleships, carriers, cruisers, and destroyers. This constituted a very large force, both in the number of ships and in the area of the ocean which they needs must occupy as they assumed the cruising formations required by the mission. It so happened that the weather became so bad shortly after we entered the Coral Sea that enemy air operations were impracticable. We were thankful that this was so in spite of the discomfort of crowded transports, heaving and tossing in the mountainous seas.

The bad weather persisted miraculously until the actual day of the attack when the convoys entered the sea area between Florida Island and Guadalcanal by way of the eastern end of Guadalcanal. Dawn broke clear and bright on the 7th of August, to find us safely past Savo, in the transport area previously designated for disembarkation. The 5th Marines (less one battalion) with the 2d Battalion of the 11th Marines (less E Battery) made the assault on Guadalcanal on a beach front extending about 1,200 yards east of what was then known as the Ilu River. This assault was followed by the 1st Marines with the 3d Battalion, 11th Marines, attached. This regiment was destined to attack in depth, striking out toward the place which we called the Grassy Knoll, afterwards known as Mount Mambulo, and finally identified as Mount Aesten. The regiment was formed in column of battalions with Lieutenant Colonel E. A. Pollock's battalion in the lead. After the passage of the 1st Marines through the 5th, Lieutenant Colonel W. E. Maxwell's battalion of the 5th Marines was to attack to the westward, seizing the line of the river then known as the Tenaru.

The landing, being well supported by naval gun fire and aviation, was unopposed and the beachhead was seized on schedule. Over toward Florida, however, there was considerable fighting and later on in Tulagi, Gavutu, and Tanambogo. There was no artillery participation as the terrain was not suitable; sea bombardment and air support were supposed to be sufficient to support the landing.

At 1000, the artillery commander and his staff landed and established the artillery command post on the banks of the Ilu River. At that time, the batteries of the 2d Battalion

and 3d Battalion had landed, reverted to battalion control, and had registered on the Block Four River to the westward. They were in position to support an advance to the west. The 5th Battalion was beginning to land, the guns coming ashore in Higgin boats and the ammunition in amphibious tractors which coupled up the howitzers and pulled them to their gun positions together with their crews and their ammunition. This battalion was emplaced slightly to the eastward of the other two in general support of an advance toward the west. The commanding officer of the 11th Marines assumed command of the beachhead as senior officer present until relieved by General Vandegrift early in the afternoon, at which time he resumed his status as artillery commander.

The operation for the following day was to be an advance to the west: the objective to seize the landing field, later called Henderson Field, which was in the process of being constructed by the Japanese. The leading battalion of the 1st Marines being out of communication, it was decided to displace forward its direct support battalion, the 3d, commanded by Lieutenant Colonel J. J. Keating, but not to emplace it in an intermediary position. It was put in readiness just west of the Tenaru River.

CONTACT with the enemy was not made on the first day on Guadalcanal except that the 5th Battalion, 11th Marines, reported a column of Japanese occasionally visible a good distance to the south of our beachhead, making their way toward the east of the island. On the 8th and 9th of August, the movement toward Henderson Field was begun by the bulk of the division. Maxwell's battalion of the 5th had not pushed on to the Tenaru as scheduled on the first day, but on the second, they crossed that stream and proceeded toward Henderson Field. The 2d Battalion, 11th Marines, was displaced westward and took up positions in support of the advance of the 5th Marines from the vicinity of the then Tenaru River which we later called the Ilu. The 3d Battalion, 11th Marines, took up a position in readiness just west of the Tenaru and was given a section of the beach front to cover with their automatic weapons. The 5th Battalion, 11th Marines, remained emplaced in the original beachhead. During the night of the 8th and 9th of August, this battalion limbered up and began its march toward Henderson Field.

On the morning of the 9th, the infantry cleared Henderson Field, and the 2d and 3d Battalions moved into positions previously selected by the Regimental Executive Officer, Lieutenant Colonel J. A. Bemis, and the Operations Officer, Major T. B. Hughes. The 2d Battalion was emplaced to cover the west flank and the beaches west of the Lunga River in direct support of the 5th Marines (Colonel L. P. Hunt), which defended that sector. The command post of that battalion was in a wooded depression directly west of the runway. The batteries were bivouacked just south of the airfield and along the Lunga River where a slight depression and heavy jungle growth gave concealment and some defilade. The 3d Battalion, 11th Marines, was bivouacked just south of the low ridge which dominated the airfield from the south. Its batteries were emplaced on the edge of the woods covering the east flank of the position and the beaches east of the Lunga River in direct support of Colonel C. B. Cates' 1st Marines which defended that sector. The 5th Battalion, 11th Marines (Lieutenant Colonel E. H. Price), was emplaced along the same ridge, facing generally north. Their right flank battery was contiguous to the left flank battery of the 3d Battalion and their left flank battery near what was later known as Edson's Ridge.

AT that time, the command posts of the 3d and 5th Battalions were in the palm groves north of the clearing which was an extension of the airfield. These were subsequently moved to the woods south of the field near the batteries. The regimental command post of the 11th Marines was set up about 200 yards east of the division command post in the woods close to the banks of the Lunga at the eastern end of a wooded, rocky formation which pointed like a finger toward the airfield, some five hundred yards distant. The Special Weapons Battery was bivouacked in the wooded depression just north of this command post.

An ammunition dump was established in the palm grove near the eastern end of the runway. The regiment employed its time in surveying and digging personnel shelters against enemy bombing. Registration on check points was initiated without delay. Numbered concentrations were prepared to cover our front and flanks.

The positions occupied by the Field Artillery at this time corresponded to the estimated situation. The Japanese had made two violent, but successful, air attacks against our transports since the landing. Our naval coverage to seaward had withdrawn after the Battle of Savo Island on the night of the 8th and 9th of August and the transports soon followed. Beach Red, the original landing beach, was still full of our supplies which were being gradually brought within the defenses of Henderson Field. They contained a separate garrison not including field artillery. We had knowledge of Japanese to the eastward of us and had made contact with the Japanese to the westward near the Matanikau River. Therefore, it was logical to prepare fires in defense of the beach front and the two flanks as far back as practicable.

The jungle to the south of us was so dense that it was not believed the Japanese would make any determined attacks from that quarter for the time being. The infantry at our disposal being so limited, there was none to cover the rear of the field artillery in its position, and, at first, none to cover the east flank of the 3d Battalion, 11th Marines. The right flank of the 1st Marines, which covered the beach front and the right flank along the Tenaru, did not meet the east flank of the 3d Battalion, 11th Marines, by about 1,000 yards. Between them lay a flat known as the Tenaru Flat which was covered with kangaroo grass.

Almost immediately, the artillery began to receive fire from small parties of Japanese, especially in our rear and along our right flank. We were obliged to cover our own rear with machine gun posts situated at intervals. After two nights of almost continuous firing, the artillery commander obtained permission from the division commander to form patrols and send them into the jungle after the Japanese. There were nine patrols in all, each commanded by an officer. These left every morning at dawn on compass course south in paralleled columns with as much lateral communication and support as was practicable in the dense growth, and returned before dark within our own lines.

Thus, the versatility of the Marine, who never forgets his infantry training, was very useful indeed. These 11th Marines' patrols combed the jungle to the south of us so effectively that harassing tactics of the Japanese in that sector ceased almost entirely. A number of Japanese were killed and ninety-five prisoners were brought in.

Infiltration from the open areas on the right flank of the 3d Battalion, 11th Marines, was countered by having various units take up defensive positions along the flats aforementioned, between the right flank of the 1st Marines and the right flank of the 11th Marines. At first, the tanks covered it, and later units from the reserve battalion of the 1st Marines. We had now arrived at the conclusion that a perimeter defense must be maintained. As there was not sufficient infantry, the south front from the Lunga to the Tenaru had to be covered by the artillery. Accordingly, we constructed a fairly continuous line of machine gun positions along this front and continued our patrolling as far as practicable.

In conformance with the new situation, the Headquarters, 11th Marines, made the necessary surveys, which were extended by the battalions. Alternate positions were constructed covering the sectors to the south which had been neglected in the first estimate. It required considerable expenditure of effort, but the fires of the entire regiment, prepared and registered, could be directed at any target within range, at any point in the perimeter. This work and the preparation of a gridded map, made from the available aerial photographs supplemented by our own surveys, occupied our time very fully in the first days of the defense of Henderson Field.

During this period, enemy air attacks occurred daily, and, with proper moon conditions, nightly. The antiaircraft weapons of the Special Weapons Battery were emplaced in accordance with the general scheme of low altitude protection of the airfield and were often in action against low flying enemy planes. The antitank weapons of this same battery were parcelled out to the infantry units to supplement those of the regimental weapons companies along the front. In addition to receiving daily air bombardments, we received bombardments from the sea as well, commencing the 12th of August at five o'clock in the morning when enemy submarines surfaced and forced us to take cover from their fires. Enemy snipers and small patrols continued to harass our lines at night.

On the 16th of August, we began to receive artillery fire from the southwest. This was purely harassing fire. In reply, since the location of the enemy batteries could not be ascertained exactly, we emplaced the batteries of the 2d and 3d Battalions facing west and gave the enemy positions about Matanikau Village a good concentrated shelling. After this, the enemy desisted from executing harassing artillery fires for a long time. During this period, the artillery fired in support of limited operations undertaken by the 5th Marines toward the Matanikau, employing a direct support battalion under Colonel Hagen.

At about this time, intelligence patrols sent out by the Division discovered Japanese landing to the eastward of us. On the night of the 21st and 22d of September, the Japanese attacked our line along the Tenaru, on the front then held by Lieutenant Colonel Pollock's battalion of the 1st Marines. This attack commenced at about 0245 in the morning, growing in intensity thereafter as daylight approached. The enemy pressed on with great vigor and determination, particularly along the sand pit at the mouth of the Tenaru, where they made a small penetration. This was subsequently erased by the infantry. The 3d Battalion, 11th Marines, was normally in position to take care of the eastern flank, being in direct support of the 1st Marines; it was well registered on several check points. The 5th Battalion had alternate positions surveyed in and was likewise registered to the eastward.

FORWARD observers of the 3d Battalion, 11th Marines, were located near the mouth of the Tenaru and 800 yards upstream. Concentrations fired by the 3d Battalion, later supplemented by concentrations fired by the 5th Battalion, caught the Japanese in mass formation and destroyed them in considerable numbers, greatly influencing the result of the action. Subsequently, Lieutenant Colonel L. B. Cresswell's battalion, 1st Marines, assisted by some tanks, counterattacked and completed the destruction of the enemy force. It was determined to have been a special landing force known as the Ichi Detachment. Apparently, this force was specially trained and equipped for the task of making a sudden attack to penetrate the airfield. The men were exceptionally large for Japanese, and their equipment included bangalore torpedoes, magnetic mines, flame throwers, an abundance of automatic weapons, and some 70mm. howitzers, which, together with their mortars, did considerable damage. Unfortunately for the Japanese, their commander attacked prematurely, without waiting for the remainder of his regiment and artillery. Apparently, they relied entirely upon surprise and the supposed superiority of the Japanese troops, which on that occasion proved to be over-estimated.

Following this enemy debacle, the 11th Marines continued its work of surveying positions for all its batteries so that the concentrated fires of all of them, controlled by the regimental fire direction center, could be brought to bear on any front. While we were burying the dead, we continued our work, and registered on the mouth of the Ilu, now called the Tenaru, and made reconnaissances beyond the perimeter defenses for the purpose of inspecting terrain which might become a target area and to secure the best available observation for our batteries.

On the 27th of August 1942, we fired the 3d and 5th Battalions in support of an operation undertaken by the 5th Marines against an enemy force located in the vicinity of Matanikau village. Pressure was put on along the Matanikau while Lieutenant Colonel Maxwell's battalion made a wide encirclement by boat, landing in the vicinity of Kokumbona. This force was to attack from there to the eastward, thus pocketing the Japanese between them and our main force. We had some prepared concentrations ready for this occasion and had sent Lieutenant Colonel Hughes with the forward observer party and a TBX radio in a Higgins boat to observe for the combined battalions, using big T methods.

The operation, as a whole, was unsuccessful in that the enemy, after stopping Maxwell's battalion about 1,000 yards east of Kokumbona, subsequently slipped around to

the southward, and when the two battalions of the 5th Marines finally made contact the next day, the enemy had made his escape and all we had for our pains was some enemy matériel which was captured. Hughes brought in one very hungry Jap prisoner who sat near the Regimental CP and wolfed a can of rations before we turned him over to the MPs. Hughes and his seagoing observation party were investigated by a Zero equipped with floats, but the enemy were discouraged by the firing of our antiaircraft small arms and all hands returned safely.

THE enemy were evidently again engaged in landing troops on Guadalcanal to the eastward of us. Their method was to come in with the troops loaded on cruisers and destroyers on a dark night, unload beyond range of our guns, and then come dashing past our beach front with their cruisers and destroyers, still out of range of our guns, and give us a stiff bombardment, usually preceded by cruiser planes which flew over us, dropping flares to mark the target for the ships. Most of the unloading of troops was taking place around Taivu Village near Koli Point, a few miles to the eastward of our position.

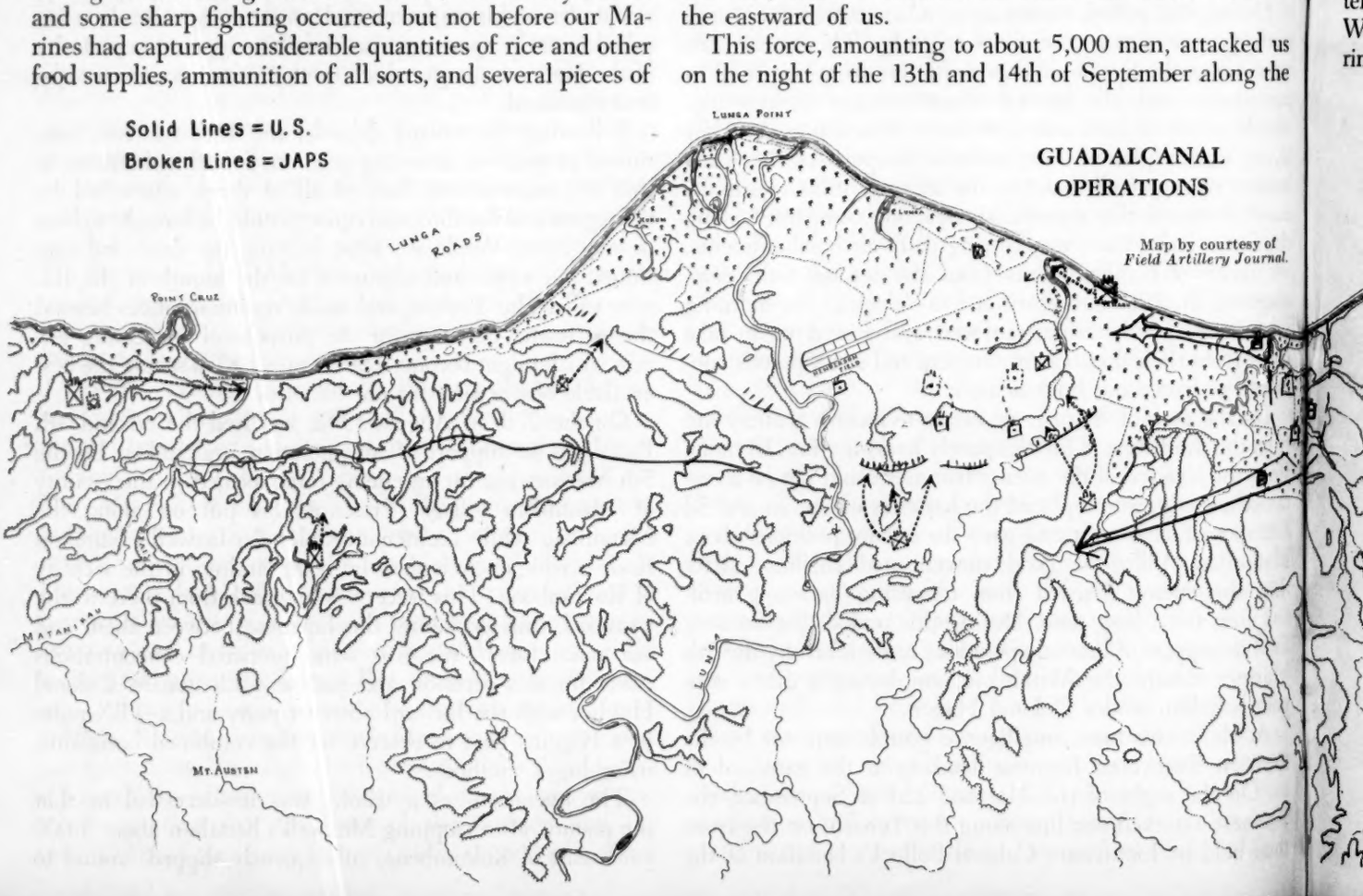
The 1st Raider Battalion and the 2d Battalion, 5th Marines, under Lieutenant Colonel M. A. Edson, were employed at this time in what might be termed a reconnaissance in force against the Japanese forces which had been landing to the eastward of us. No artillery accompanied these units, but it so happened that an American convoy of several ships, arriving simultaneously with the landing of Edson's force, caused the enemy to flee precipitantly, believing he was being attacked in force. Later they rallied and some sharp fighting occurred, but not before our Marines had captured considerable quantities of rice and other food supplies, ammunition of all sorts, and several pieces of 75mm. artillery which were dragged to the beach and pulled out into deep water by the boats. Our raiding force then reembarked successfully and came into the perimeter for a rest period.

About the 6th of September, General Vandegrift decided to shift his command post to a position just south of the 5th Battalion, 11th Marines, and near the ridge later known as Raiders' Ridge. The 11th Marines accordingly followed suit and began to prepare a new command post just south of the 2d Battalion, 11th Marines. Due to the presence of the enemy on our eastern flank during this period, certain batteries were emplaced nightly facing the east, while the 5th Battalion was emplaced to fire south.

On the 7th of September, Major Nees, Captain Healy, and Lieutenants Blair and Cohen arrived from the 4th Battalion, 11th Marines, as replacements. Nees was assigned as assistant to the Regimental Operations Officer, Lieutenant Colonel Hughes, and Healy, Blair, and Cohen were assigned to battalions.

The enemy increased his air and sea attacks against us at this time and the infantry patrols reported that the Japanese to the eastward were cutting trail in a generally westward direction through the jungle. Apparently, during this period, the enemy landed the following troops: the 124th Infantry Regiment of the 18th Division, the 2d Echelon and the Ichiki Detachment, the 2d Battalion of the 4th Infantry Regiment of the 2d Division, the Morguchi Signal Unit, a mortar battalion, one battery of the 47th Field Antiaircraft Battalion, and some engineer troops. All of these, except the 2d Battalion of the 124th Infantry under Colonel Oka, landed between Koli Point and Taivu Point to the eastward of us.

This force, amounting to about 5,000 men, attacked us on the night of the 13th and 14th of September along the



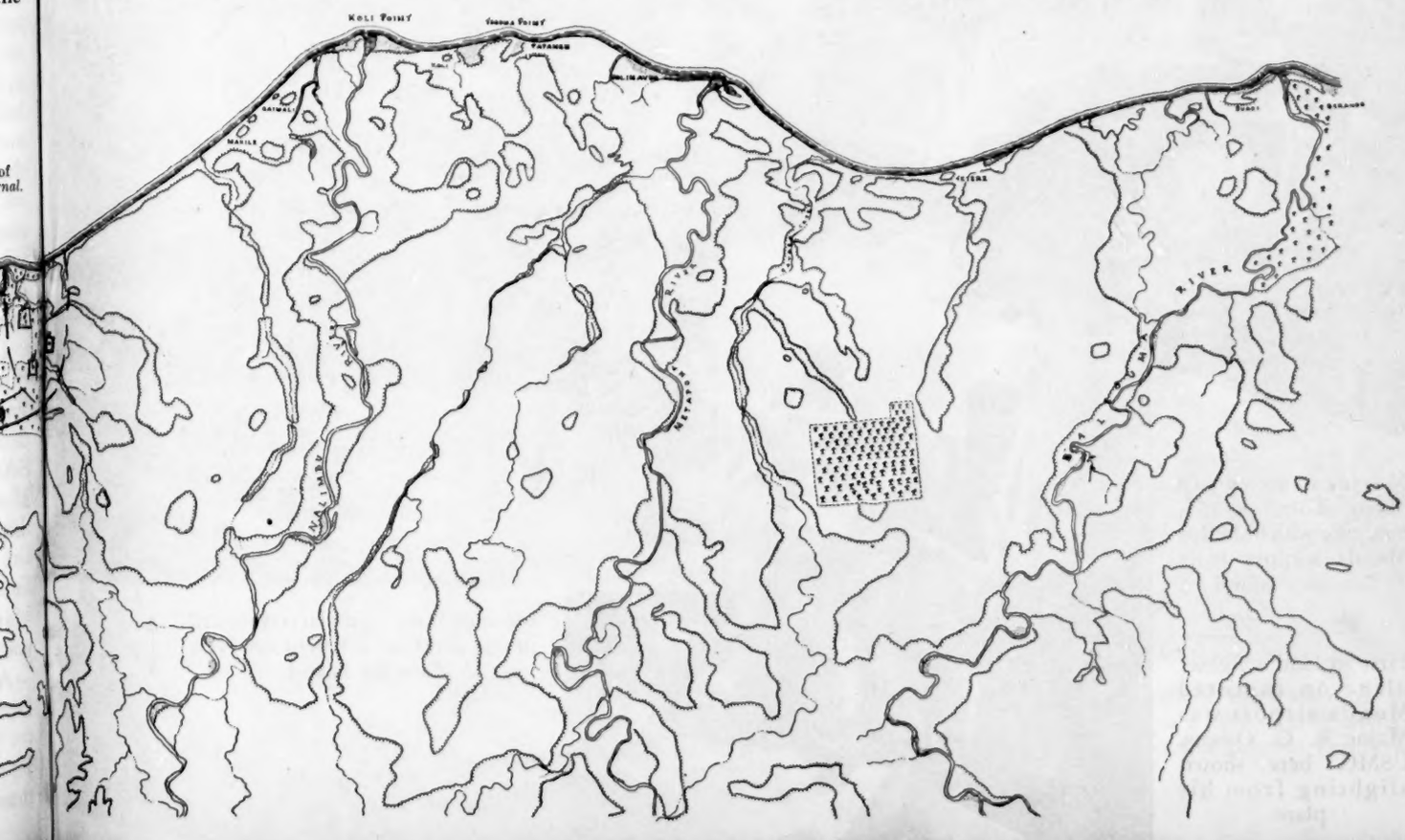
ridge just south of the new command posts, later known as Edson's Ridge. Our defenses at this point, which made a salient to the south, consisted of hastily dug fox holes occupied by Edson's 1st Raider Battalion and some paratroopers from the 1st Paratroop Battalion, in all less than 1,000 effectives—and armed as light infantry. In direct support of this defense was the 5th Battalion, 11th Marines. Captain Healy was the Forward Observer and had his OP near Colonel Edson's CP. The Special Weapons Battery, 11th Marines, with Major Robert Viall commanding, was bivouacked along the flank of the ridge about 300 yards south of the artillery command post as local security.

The first onrush of the enemy forced back our forces from the ridge but the fires of the 105's of the 5th Battalion, 11th Marines, checked the enemy and permitted our troops to reorganize and return to counterattack and eject the invaders. The bivouac of the Special Weapons Battery having been overrun by the enemy, they were placed in position along the base of the ridge between the Division Command Post and the Regimental CP of the 11th Marines. This battery, with its automatic weapons, were in position all night prepared to back up the Raiders on the ridge. They stood steadily, without firing a shot, in that fire-swept zone all through the night. Lieutenant Colonel Bemis, the Executive Officer, made occasional visits to Colonel Edson's CP and kept us informed of the front line situation. Captain Healy and his observing party, having been washed back when the Japanese tide overran our positions, were lost in the jungle and Corporal, later Lieutenant Watson performed the duties of Forward Observer, using what communications he could, including a telephone at the Division Command Post. Major N. P. Wood, Jr., then commanding the 5th Battalion, 11th Marines, notified the artillery commander that he had no communication with the engaged infantry and requested instruction. He was told to continue firing on the last concentrations requested by the infantry and in the meantime, we sent Major Nees with an observation party to report to Colonel Edson as Forward Observer.

While these preparations were being made, we continued to fire upon the enemy by ear. This curious method was possible because we were familiar with the prepared concentrations and the terrain of the target area and were so close to the bursting of our own shells that we could hear them very plainly. While this method is not recommended, it had to serve in a situation which was sometimes desperate, so much so that the artillery commander loaded up the confidential matter in a jeep and had it ready to move to the rear to keep it from falling into the hands of the enemy. The disparity between the enemy forces and ours was such that only the persistent fire of our own field artillery could balance it in our favor. The battalion continued firing furiously all night long and at such short ranges that two tree bursts fell on the Division Command Post. Toward dawn Lieutenant Colonel W. J. Whaling's battalion of the 5th, which was in division reserve, counterattacked and the enemy remnants withdrew, pursued by our patrols.

The enemy losses were appalling. The Ichiki Unit was wiped out, the 1st Battalion now of the 124th Infantry likewise, and the 2d Battalion of the 4th lost 380 killed. Some 300 enemy wounded returned to the eastern area. The remainder cut their way through the jungle, without food, to rejoin their comrades to the west of us. According to prisoners and diaries, about half of them perished in the jungle. This was a very serious defeat by a handful of our light infantry, backed by the 105's, against an enemy force five times its size consisting of specially trained troops.

(To be continued)



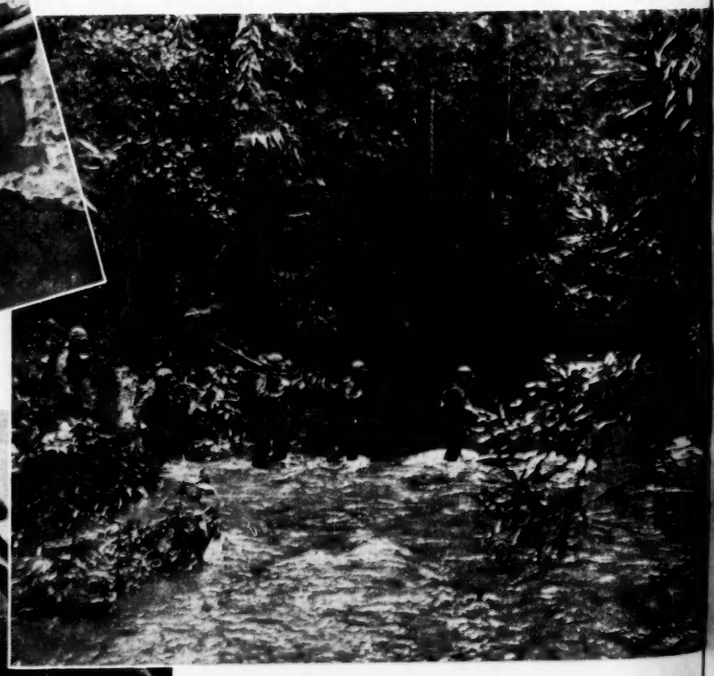
Coconut palms serve as basic road-building material for the Seabees through the jungle mud of Rendova.

Behind a revetment of sand bags and coconut logs, a Marine antiaircraft crew mans a 90mm. gun on Rendova.

MARINES *at work i*

↑ Marines move up "Long Tom," a 155-mm. rifle which shelled Munda airport from Rendova Island.

→ First to land a fighter plane on captured Munda airport was Major R. G. Owens, USMC, here shown alighting from his plane.



Marines cross a malaria-infested jungle river in a patrol on New Georgia Island. ↑

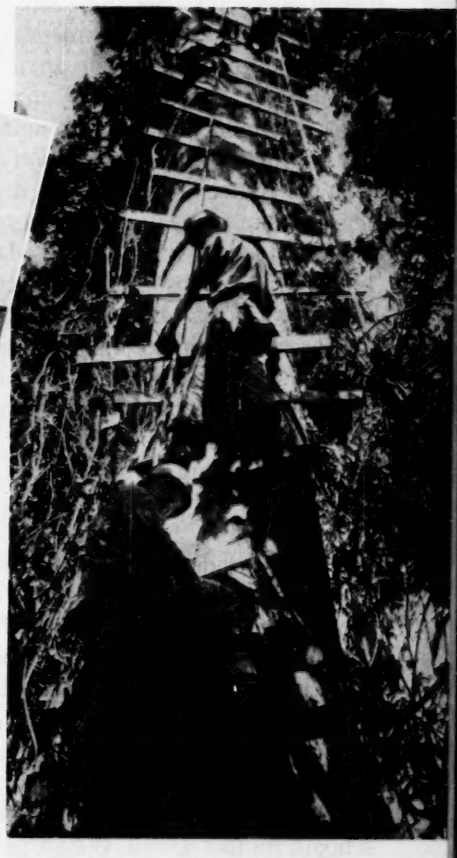
Waiting by the weapons truck that transports pilots to their ships on newly captured Munda airport are these Marine fighter pilots: kneeling, First Lieutenant D. W. Rankin, First Lieutenant H. W. Hollmeyer, and First Lieutenant J. W. Petit; standing, First Lieutenant J. G. Taylor, Second Lieutenant A. J. Jensen, First Lieutenant D. Sigel, and First Lieutenant H. Scarborough.

On Rendova, Marine officers discuss some antiaircraft problems. They are, left to right: Major Z. W. Burriss and Colonel John W. Thomason, Jr., on an inspection tour, and Lieutenant Colonel W. Scheyer, commander of Marine artillery.

k in the South Pacific

Among the Marines in the first flight to land on Munda airport were these pilots: standing, First Lieutenant R. K. Wolff, Captain R. L. Braun, Captain R. E. Johnson, and First Lieutenant A. R. Conant; seated, First Lieutenant D. A. Escher and Major R. G. Owens.

Behind a concealed stream of tropical foliage, Marines load this 155mm. gun on Rendova Beach.



Marines officers climb the rungs of a ladder on a 50 foot tree used as an observation post on Rendova.

First to Fight*

By Lieutenant General Thomas Holcomb
Commandant, U. S. Marine Corps

OFFICERS of the Field Artillery Course, the Reserve Officers' Course, and members of the Candidates' Class: I congratulate you upon the successful completion of your courses, and for the Candidates' Class I have a hearty welcome as new members of the officers' ranks of the Marine Corps.

It is no accident that you are wearing bars on your shoulders today. You have earned them—and while they entitle you to certain privileges and recognition, they also place upon you a very definite responsibility. The manner in which you wear them will affect the reputation of the Marine Corps. If you wear them well, with courage, with intelligence, and with due humility you will enhance our reputation. Reputation in the end is only a by-product of our acts. Reputation, to be real, like respect, must be earned—not demanded.

The Marine Corps has earned its reputation—it is not an accident. It comes from two sources—training and experience in combat—more than a hundred and sixty-seven years of both, as far as the Marine Corps is concerned. I repeat, our reputation and proficiency are not accidents.

Each of our previous operations has taught us lessons that are useful in succeeding operations. Warfare is continually changing in a tactical sense—that is, in its employment of new and ever-improving weapons. There can be little change in the strategical sense—that is, in the concentration of force where the enemy is weak, resolve to carry through and press an advantage, use of the element of surprise, meticulous planning in advance, gaining as much knowledge as possible of the enemies' strength, disposition, plans and habits, and a willingness and ability to change and improvise when the occasion demands it.

In the course of this war, on a scale which the world has never before seen, it is possible to lose sight of what your particular job is—of what the Marine Corps' job really is. The Marine Corps' primary function is to prepare the way for other troops. Ours is an amphibious operation—it has been recently called a "triphibious" operation. For that purpose we have trained for over a hundred and sixty-seven years. We are today, I believe, the most proficient amphibious military body in the world, and I say this with due modesty. We are so because of our experience and our training and our morale, which is a result of this experience and training.

It is no accident that the Marines are the First to Fight. They were the first U. S. troops to fight offensively in this war. They are the first because they must prepare the way. Because they are the first they must always be ready—you must be ready. With the many landings which will be required in the Pacific before Japan is finally conquered, many more opportunities will be presented us.

This specialized requirement of the Marine Corps requires specialized training. That is the reason for our schools, for this school. We are proud of our schools. We are confident they are the best in the world for our particular job. They not only give you the experience we have obtained in fighting under varying and ever-changing conditions in many parts of the world, they give you also the most exhaustive research of landing operations of others throughout the world's written military history. And many of us have had the advantage, because of our peculiar amphibious job, of studying in the best of the Army and Navy Schools, an advantage that officers in other branches of the military profession do not often get.

This schooling, this training, however, does not make us better Army officers than the best Army officers or better Naval officers than the best Navy officers. They can run the Army far better than we can. They can run the Navy far better than we can. But by the same token, because of our specialized training, we can run amphibious and landing operations better than they can. With our tradition, experience, and our training, they could run amphibious operations as effectively as we can, but they do not spend their lives in this specialization. We do.

Now all this training, all this experience, will be of little avail unless it is built on the proper material, on men of the right character. We must have men who feel a sense of responsibility to their country, a sense of responsibility which makes them willing to take chances, to risk their lives if necessary, in dangerous and different tasks. We must have men who want to learn; men who realize that discipline is essential for the best results, who recognize they have a responsibility to the men under them as well as to those above them. We must have men who realize that teamwork is important, that it pays dividends. And finally, we must have men who realize that they must cultivate ingenuity, inventiveness for the occasion when those qualities are required.

A Marine, you see, is therefore a man who disciplines himself and accepts discipline from others when required. He is a man who has practiced and learned self-control. Some of the best Marines I have known are soft-spoken, quiet men. They are usually the qualities of the men with the most resolve and the most courage. Loud talkers are often those of little control, often the indication of an inferiority. Now this sounds as if our men are all the ideal—they are not—some have these qualities to a greater degree than others. The greater the degree to which we have them, the greater the success we shall have in the jobs assigned to each of us.

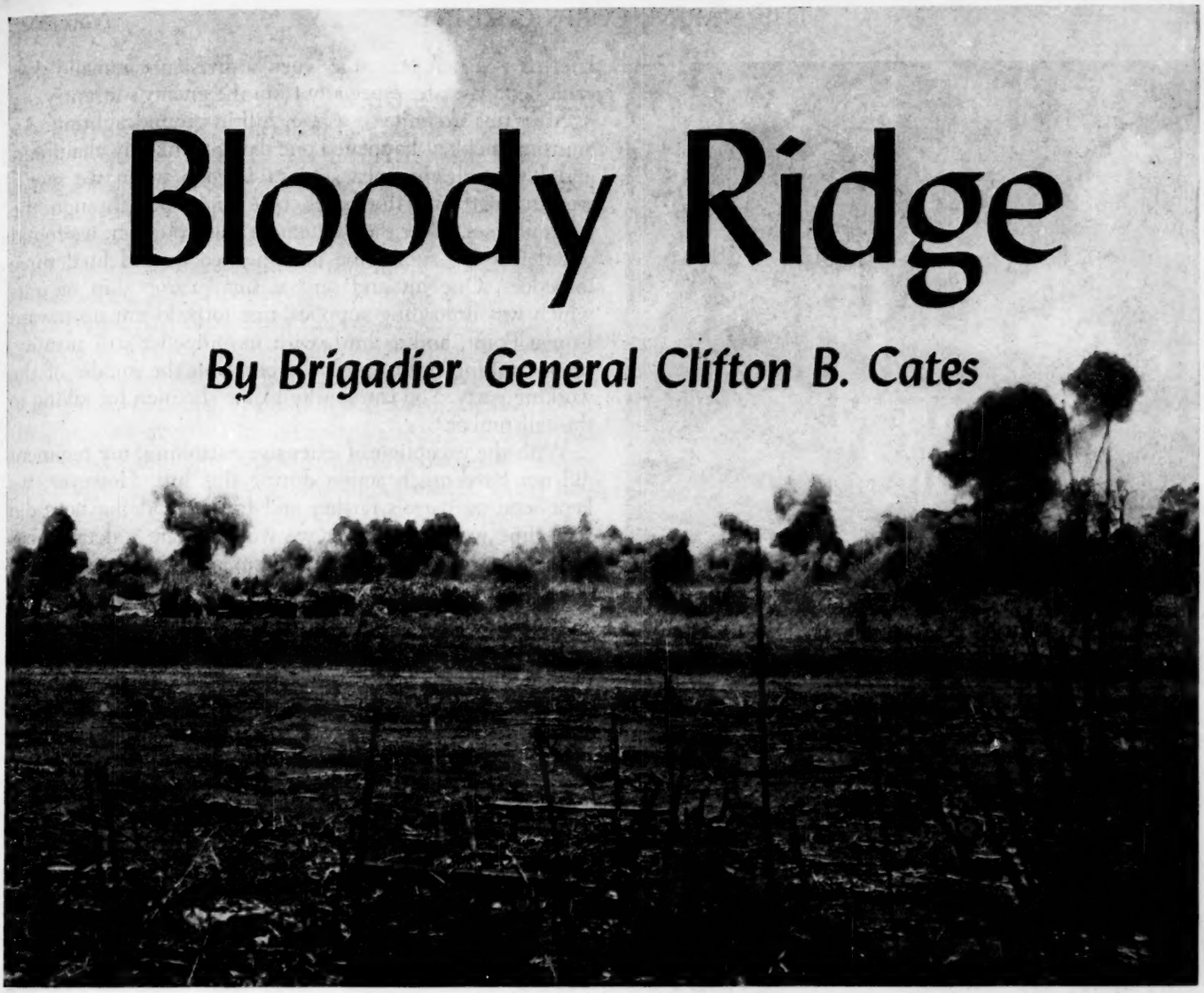
With the proper character and this training you will gain confidence—and confidence you must have—confidence, not cockiness, and confidence comes from knowing how to do your job. It comes from training, from experience—it comes only the hard way.

You officers will be leaders in our future operations. Leadership is not easy, it is not automatic. You must be possessed of those qualities of leadership which command respect and loyalty—which inspire in all hands the determination—and more important—the compelling desire to work together for a common end. No graph, no chart, no rules and regulations or other printed words can take the place of such leadership. May you have it to the greatest degree possible.

*This was the Commandant's address to graduating classes at the Marine Corps Schools, Quantico, Virginia, September 22, 1943.

Bloody Ridge

By Brigadier General Clifton B. Cates



EDITOR'S NOTE: *This is the second article from the memoirs of Brigadier General Clifton B. Cates, who was the colonel commanding the First Regiment of Marines in the fighting on Guadalcanal. In a previous issue of* THE MARINE CORPS GAZETTE *General Cates told how his regiment scored the Americans' first real land victory in the Solomon Islands by repulsing, with heavy losses, the Japanese in the Battle of the Tenaru River. Here the General discusses some of the daily problems and tells briefly of the savage fighting at Bloody Ridge and subsequent events. Another installment will follow next month.*

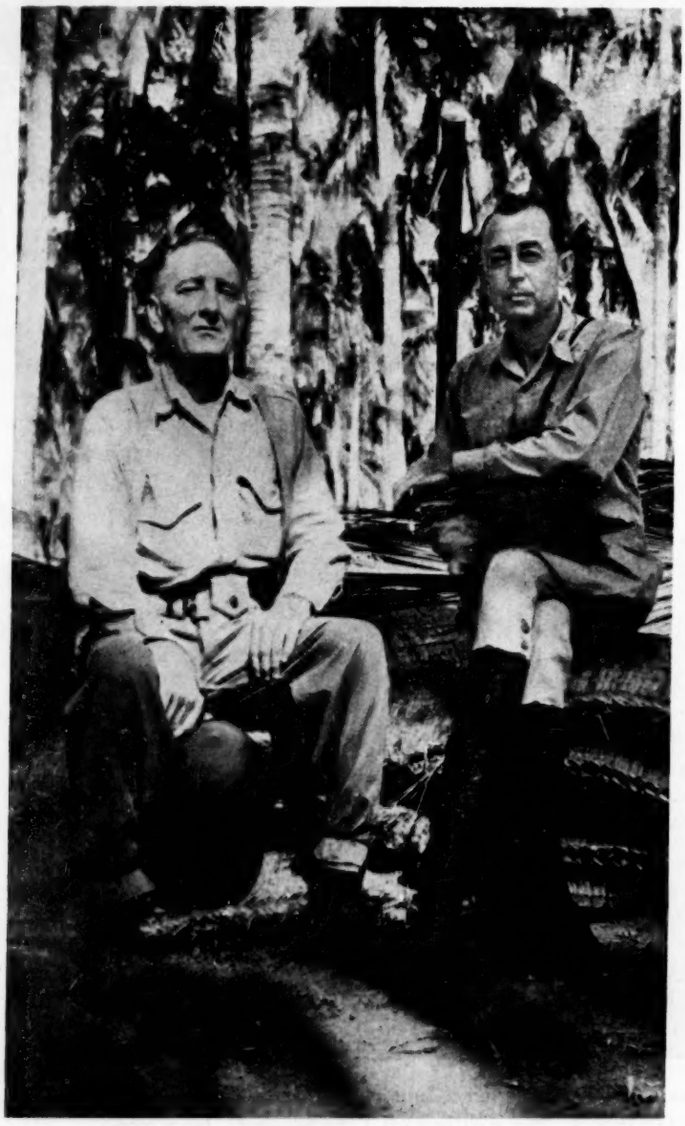
ONE thing we learned the hard way. We definitely needed more engineers and laborers in the division, as it was necessary to take extra large working parties from each unit daily to repair the airfield and to handle supplies on the beaches. At times my regiment had almost 1,000 men away from the front line on working parties. Naturally, the preparation of our defensive position suffered and the men were also fatigued for their night watches. Luckily, the Japs always attacked during darkness so they did not catch us short-handed in the front lines.

We also had an acute shortage of entrenching and engineering tools. Axes, brush-hooks, shovels, machetes, and bolos, were at a premium. Everyone jealously guarded the limited supply.

On the night of the 13-14th of September, 1942, the enemy launched a strong night attack from the south against what we considered our rear. It was executed by units that had been landed from cruisers and destroyers east of our beachhead. They had advanced inland through the dense jungle, cutting numerous trails, from Koli Point southwest across the Ilu River. The main effort was made against the 1st Raider Battalion and the Parachute Battalion which occupied positions along the ridge south of the airfield, later called "Bloody Ridge." The Japanese made a temporary penetration just east of the Lunga River and also east of Bloody Ridge. It was necessary for our artillery to join into the fire-fight with automatic weapons to save the situation. Later, reserves were rushed in and the lines were restored.

A strong attack was also made against the 3rd Battalion, 1st Marines. In my opinion, it was a holding attack to keep us from flanking their main body. They evidently hadn't forgotten the Battle of the Tenaru where we encircled a regiment and slaughtered 1,000 of them. The fighting lasted practically all night and the enemy withdrew after suffering heavy casualties. They left 600 dead along the Ridge, and 200 in the wire and in the field in front of Lieutenant Colonel William M. McKelvy Jr's. battalion. In addition, many more dead were later found in the jungle,

Above: A stick of heavy bombs bursts on Henderson Field, the focal point in the fierce action on Guadalcanal.



Colonel L. P. Hunt and Colonel Cates at C.P. of 1st Marines.

where heavy artillery and mortar concentrations were laid.

Afterwards, we salvaged much miscellaneous equipment abandoned by the enemy in their flight. They must have withdrawn in a great hurry as it was not the usual custom for the Japs to abandon their equipment and dead. Our casualties were very light but the raiders and paramarines were fairly hard hit.

General Vandegrift had originally selected a site for his command post which was not only a low, muddy spot, but it was near the airfield and a battery of AA guns. As it was straddled with 1,000 pound bombs in several air-raids, he decided it was time to move to a better location. So the engineers built a nice screened command post for him south of the airfield in the jungle on a high ridge. The night after he moved in, the Japs attacked down the Ridge and quite a few infiltrated all around him. It was a hot spot. I went up to see him the afternoon of the 14th of September and I found everyone on the nervous side. Three Japs had just come charging out of the brush yelling *"Banzai"* as they ran through the command post with fixed bayonets and killed a sergeant before he knew it. Two of the Japs were killed but one got away. Orders were issued to rebuild the old command post and the General moved back a few days later. It is a hell of a war when a division command post can't be fairly safe, especially from the enemy's infantry.

After this we enjoyed a brief lull in ground fighting. An amusing incident happened one day. Strunk, my chauffeur, and I were driving near Lunga Lagoon when we saw a working party on the beach take flight out through the coconut trees. After the excitement calmed down, we found out that a Jap submarine had sneaked in and fired three torpedoes. One hit and sank a small cargo ship of ours which was unloading supplies, one torpedo ran up toward Lunga Point, and a third, with its propeller still turning, came crashing right up on the beach in the middle of the working party. You can hardly blame the men for taking to the tall timber.

With the exception of extensive patrolling, my regiment did not have much action during this lull. However, we kept sending patrols farther and farther and the boys did some fine work. Wherever we would locate a detachment of Japs we would go right after them, and give them no rest.

FROM all indications, the Japs were now concentrating their forces to the west of our beachhead in the vicinity of Kokumbona. They would slip troops in at night by cruisers and destroyers, evidently with the idea of building up a force for another strong attack on us. Our planes and artillery kept pounding them and must have inflicted heavy casualties.

One of the things that I liked was the spirit of coöperation existing among all units. No one was trying to make a name for himself at the expense of the others.

The morale of the outfit remained excellent, although everyone was, to a certain extent, down physically. We had had two months of hard work with some heavy fighting, and we had been under the strain of intense bombing almost daily for six weeks, and heavy naval gunfire at night. Our nerves, naturally were on edge and a few officers and men had broken under the strain. But as a whole we had stood it very well. Although we had suffered some casualties, they were small in comparison to what we had inflicted on the Japs.

Incidentally, I would like to say a word of praise for our Medical Department. Since the First World War there has been a big improvement in the treatment of the wounded. This can mostly be attributed to the following: blood plasma, use of sulfa drugs, expediting of field treatment, modern equipment and evacuation by plane to base hospitals. The doctors and corpsmen have done an excellent job, but like the rest of us, they undoubtedly learned a lot from this experience.

As is always the case in circumstances like these, we had no shortage of scuttlebutt. One recurrent rumor was to the effect that Premier Tojo's son, an aviator, had been missing in action on a flight over Guadalcanal. About this time some of our patrols captured a Jap pilot who had been shot down south of Red Ridge. He was undoubtedly an officer, although he was dressed only in new Marine Corps underwear. God only knows where he got it. He was a very belligerent type and refused to answer any questions, but he kept repeating that he was the son of a very high-ranking official in Japan. We have all since wondered if it could have been Mr. Tojo, Jr.

My most valuable possession during this campaign was my portable radio. Little did I realize when I purchased it, just before leaving Philadelphia, how much it would mean to me. It was the source of much entertainment and enjoyment. I always had a large audience listening to the news, athletic events, and musical programs which we would get from San Francisco shortwave stations. We listened with great interest to the World Series and to play-by-play accounts of the larger football games.

Of course, the daily news review was the most popular program as we liked to hear how we Marines were doing. Some of the colored and inaccurate reports got good horse laughs from the boys. We all knew it was no pink tea, but there was no question in our minds about us holding the beachhead if the Navy would keep us supplied with bullets and beans. The boys gave the "Bronx cheer" to all suggestions that Guadalcanal would be another Bataan.

ONE afternoon Captain Smith (Major John Lucien Smith who received the Congressional Medal of Honor for shooting down nineteen Jap planes) was shot down after he had got two Jap Zeros. He made a crash landing in Japanese territory about three miles east of our lines. By radio, I immediately contacted my patrols which were returning from that vicinity, and started a search for him. I also ordered out additional combat patrols, but by late afternoon they had not located either Smith or his plane.

After looking at the map and gazing into my own personal crystal-ball, I figured the most probable route I would take if I were in Smith's place and able to walk. Jumping into my jeep, Strunk and I headed through a jungle trail across the upper branches of the Tenaru. After reaching the grassy field where there was good visibility, we waited. Within ten minutes I saw Smith emerge from the dense woods along the Ilu right in front of us. It was almost dark and at first he thought we were Japs. But after we yelled at him he came on in and we drove him back to camp. He was unhurt except for shock and a bump on his head but he was completely fagged out from his long hike (actually a run) through the jungle and swampy ground.

In answer to my question, he said he had not waited to destroy his plane, instruments, and maps. The thing he mostly was concerned about was losing his lucky baseball cap (all aviators wear them). It was a happy bunch of youngsters at his bivouac when I drove up with him.

Just about dark, one of my patrols located and burned his damaged plane. They returned with the prized baseball cap which was delivered to him.

First Marine C.P. 9 August to 15 October 1942. It was badly damaged by naval gunfire on the night of 13-14 October and by aerial bombardment 15 October 1942.

The Quartermaster Department Goes to War

THE vast and rapid expansion of the United States Marine Corps, which, by the end of 1943 will be approximately twenty times the size it was in September, 1939, has caused many vexing problems to many persons in authority. Upon the shoulders of those responsible for procurement and supply, however, has fallen a particularly heavy burden. And the officers and men of the Quartermaster Department are proud of what they have achieved in this hectic growing period.

In any such rapid expansion, the first problem to be met is housing capacity. This was accomplished by augmenting existing facilities, the development of the New River and Santa Margarita projects, and expansion at Quantico, Parris Island, and in the San Diego area. Temporary expedients, naturally, are always resorted to in order to offer accommodations at the earliest possible time. Then long range planning is resorted to in order to keep a steady flow of trained troops ready for the combat areas.

Early in this war, the Marine Corps was unexpectedly but largely committed to the Pacific theatre. All its procurement and training centered around "Amphibious Warfare" and the two large bases, Camp Lejeune at New River, North Carolina, and Camp Pendleton at Santa Margarita Rancho, Oceanside, California, were ideally fitted for such training.

For the present, let us consider the organization and functioning of the Quartermaster Department from the point of view of its activities at Headquarters, Marine Corps, and, in later articles to be published in the MARINE CORPS GAZETTE, enlarge upon the activities of some of the more important sub-divisions of the Department. It is hoped that other articles on the functioning of the Marine Corps Supply system throughout the United States and in the theatre of operation will be published, thus rounding out an overall picture of the contribution of the Quartermaster Department in the war effort of the Marine Corps in World War II.

The Quartermaster Department in a Marine Corps of about 18,000 men in 1939, was faced with a serious problem of training personnel to carry out the task of rapid expansion in the smoothest possible manner. To meet this emergency, a great many of the older enlisted personnel were commissioned to enable the Quartermaster properly to organize and plan a program. A school of Quartermaster Department Administration to train new personnel was established first at Quantico and later moved to New River, when suitable accommodations were available. The school has accomplished excellent results and has been a useful source feeder to fill the numerous calls that have been made upon it for instructed personnel. In addition to graduates of this school, personnel has been augmented by the commissioning of officers and enlisting men of specialized ability in quartermaster duties. This latter source has been particularly valuable in the expansion at Headquarters and the two main bases of supply, the Philadelphia Depot and the San Francisco Depot.

Under normal conditions, the Philadelphia Depot was the factory and main supply source of the corps; its facilities as well as space had to be materially expanded to take care of the expanding needs. Its personnel has increased from about 700 in 1939 to about 6,000 today. It is believed that no other facility of the government enjoys the distinction of dealing in the variety of services that are present there. These include the manufacture of clothing, wood and steel products, ordnance overhaul, motor car and truck overhaul, metal finishing, publicity writing, machinery for the production of recruiting posters and literature, and other interesting facilities connected with the inspection, processing, and storage of materials for the manufacture of clothing. Practically all items of general use throughout the Marine Corps are either manufactured or purchased and distributed to all subsidiary depots of the Corps from this depot.

The San Francisco Depot, while not a manufacturing facility, has been rapidly expanded and has grown to such an extent that it now furnishes supplies to about 70% of the Marine Corps and makes the bulk of all overseas shipments to combat forces.

At the outset of a war, when the armed services start an intensified program of procurement, existing facilities are jammed and bottlenecks appear. Procurement becomes a struggle for survival of the fittest.

By its enviable reputation in the commercial world for fair dealing, lack of red tape, and prompt payment, the Marine Corps has proceeded with its program of procurement in an orderly manner. Although many experiments have been tried by the War Production Board and other quickly set up agencies for the control of materials and sources of supply, in spite of their restrictions, every obstacle has been met and hurdled and materials necessary for the combat forces have been received and distributed in a steady flow. No very serious shortages have developed.

Notwithstanding the inherent opposition that is engendered in a procurement officer by regimentation and superimposed regulative agencies, it can be forcefully stated that, while the old-timer resented restriction of his sphere, the specialized agencies set up to stimulate and coordinate industry have done an outstanding job and have been instrumental in planning and distributing raw materials, man-power, and facilities until, at the present time, demands are being met and procurement is decidedly less difficult than two years ago.

In order to get into step and be able to keep up with the other competing departments, it has been necessary to keep in close contact with government procurement agencies, and constantly to make substitutions and change vital specifications in order to carry out conservation programs and spread vital metals and materials over the field

where most urgently needed. The outfitting and equipping of combat units has progressed smoothly with the help of those Navy Bureaus which are concerned in Marine Corps supply and growth.

THE Quartermaster Department is one of the six major departments directly under the Commandant. Head of the department is the Quartermaster, Major General Seth Williams. In order to properly plan and supervise this program of supply the Quartermaster Department at Headquarters was expanded and reorganized. The Quartermaster is responsible for the procurement, storage, and issuance of all kinds of materials, the transportation of Marine Corps materials and personnel, and the administration of Quartermaster personnel.

Directly under the Quartermaster and his executive officers are several major departments and divisions with duties and functions as indicated:

The Military Field Personnel Division details and assigns officers, warrant officers, and enlisted men; makes recommendations as to the authorized allowances of Quartermaster personnel at posts, stations, and organizations of the Fleet Marine Force; assigns enlisted men to the School of Quartermaster Administration and the Motor Transport School; and has charge of the application of laws, rules, and policies regarding personnel of the QM Dept. This division also maintains station rosters of all Quartermaster personnel throughout the Marine Corps, together with card records, data sheets, and a chart showing the authorized and actual distribution of Quartermaster personnel for promotion boards.

The Special Civilian Assistant to the Quartermaster is an office of great importance. He is the administrative and budget officer of the Quartermaster and has charge of the allotment of funds to field activities, the authorization of civil personnel, and the secretarial work of the Quartermaster and of his military and civilian assistants.

The Chief Clerk has under his direction sections devoted to civilian personnel, attendance and leaves, duplicating, printing and publishing, messengers, mailing and filing. Among the duties of this section are matters pertaining to civilian employees, quartermaster changes in the Marine Corps Manual, uniform regulations, the procurement of blank forms and publications used by the Marine Corps, distribution of bulletins, field manuals, etc., the placing of orders for photostats and ozalids and the duplication by mimeograph or multigraph of material for Marine Corps Headquarters.

The Finance Division is responsible for the keeping of the appropriation ledger of the Quartermaster Department; the securing of bonds, checks, and funds for assistant quartermasters and disbursing officers; the auditing of accounts of post quartermasters and disbursing officers and of naval invoices; and assisting the quartermaster in preparing the annual budget and supplementary schedules.

One of the first divisions of the Quartermaster Department to feel the full effect of the war was the *Utilities and Public Works Division*. This division is responsible for new buildings and utilities repair; it maintains mechanical equipment in buildings and furniture and equipment in quarters; and provides fuel and forage. Its most extensive accomplishments to date have been the building of the new bases, Camp Lejeune and Camp Pendleton, and the expansion of several others.

The War Plans and Statistical Division prepares and revises material war plans, computes deficiencies of material and funds of the budget, makes estimates for new units, and maintains the quartermaster secret and confidential files. This division must, of necessity, work in close coordination with the Division of Plans and Policies at Headquarters.

The Disbursing and Transportation Division directs quartermaster disbursing activities at Headquarters, routing instructions to shipping officers in the field, transportation for troop movements, shipping of household effects, and the disposition of the remains of deceased Marines.

The Purchase Division is responsible for the purchase of all clothing and stores used both on the east coast and shipped to the San Francisco Depot; it prepares contracts for board and lodging agreements and leases and administers the provision rating system and the conservation of critical materials.

Of vital importance in the contact between Headquarters and the field is the group of division known as the *Supply Group:* the Motor Transport Division, the Property Accounting Division, Signal Supply Division, Engineer Division, Ordnance Division, and Supply Division.

The Motor Transport Division is responsible for the procurement and distribution of transportation equipment, the inspection and testing of new equipment, and regulations governing its operation and maintenance. Under this division is conducted Motor Transport Schools at New River and the Marine Corps Base at San Diego.

The Property Accounting Division maintains property control records of all organizations and audits sales and checkages.

The Signal Supply Division is responsible for the procurement, maintenance, and distribution of radio, telephone, telegraphic, electronic, and other signal equipment.

The Engineer Division is responsible for recommendations about maintenance and the distribution of engineer equipment. It maintains schools at New River, Camp Pendleton, and Camp Elliott.

The Ordnance Division is responsible for the procurement and distribution of ordnance, ammunitions, and equipments. It also estimates requirements, including parts and accessories, for maintenance of weapons. Ordnance personnel is trained at the Ordnance School and Repair Depot at Quantico and elsewhere. New equipment is tested at the proving-grounds at Indian Head, Maryland.

The Supply Division is responsible for all supplies other than those mentioned in the foregoing divisions, the procurement, maintenance, and distribution of them and disposal of surplus property. This division also passes upon recommendations of boards of survey covering property of every character, (including Navy ordnance and boats) which is lost, worn out, obsolete, destroyed, stolen, or rendered unfit for Marine Corps use.

Two Navy bureaus work in close conjunction with the Quartermaster Department. The Bureau of Medicine and Surgery furnishes all necessary medicines, equipment, and field personnel for the treatment of sick and wounded. The

Bureau of Aeronautics furnishes all equipment, barracks, and facilities for Marine Corps aviation which is a component part of Naval Aviation.

After organizations are planned and projected by the Commandant of the Marine Corps, Tables of Basic Allowances are prepared in the Four Section of Planes and Policies of the Commandant's Office and after approval, are used as a basis of procurement for all items noted therein. All other items of housekeeping and up-keep of posts and stations are planned for by the Quartermaster.

During the periods of rapid expansion, each time a new strength of the Corps was approved by the President, it became necessary to go in the market and purchase from A to Z all items needed for such an expansion as well as plan for and speed up the construction of more quarters and storage facilities. New construction has been ably accomplished through the hearty spirit of coöperation on the part of the Bureau of Yards and Docks of the Navy, which contracts for and supervises all Marine Corps construction projects. Our storage needs have been added to by large storage space allotments to the Marine Corps through the generosity of the Bureau of Supplies and Accounts of the Navy from facilities already constructed. This has been a great boon to the Marine Corps.

In order to help the reader visualize the growing complexity of the problems which face the Quartermaster Department since the beginning of the war expansion, the following authorizations for maximum enlisted strength and appropriation are given:

Authorized	*Enlisted*
8 Sept. 1939	25,000
July 1940	45,934
28 April 1941	75,000
8 Aug. 1941	104,000
16 Feb. 1942	130,000
11 May 1942	220,000
29 Aug. 1942	285,000
3 May 1943	334,500
5 Aug. 1943	358,500

To the last figure should be added an additional 12,000–V-12's (College students) and 18,000 Women's Reserve, making a total of 388,500 approved strength at the present time.

Marine Bond Buying

ONE of the most unfortunate slogans ever coined by the American people—as far as the Japs are concerned—was "Remember Pearl Harbor!" During the past two years, there have been many occasions when the Japs would have cheerfully forgotten the whole business.

That Pearl Harbor Day is a "natural" for the sale of War Bonds was indicated last year, when on the first anniversary of the sneak attack, the Marine Corps, Navy, and Coast Guard turned out practically en masse to buy War Bonds, both as a symbol of the great cause to which they were all dedicated and as a practical means of spiking Japanese guns.

One of the most amazing features of last year's Pearl Harbor Day War Bond sales was that they were spontaneous. There was no concerted drive, no pressure to buy. The impulse was there and the day itself furnished a perfect occasion for buying bonds. The total of bond sales for that day, $7,416,763.00, indicates that the entire naval establishment caught on to the importance of bond-buying on the first anniversary of our entrance into the greatest war of all history. This year Pearl Harbor Day is expected to see bond sales skyrocket as the combined Marine, Navy, and Coast Guard personnel remember Pearl Harbor in a way that will hurt Tojo in a tender spot. Sales on December 7 are expected to total approximately $15,000,000.00, or twice the 1942 total, and, once again, Marine Corps personnel is going to do more than its share. Next to making the desired contact with the enemy, Marines figure that buying War Bonds is as good a way as any to bring the war home to Tokyo.

The War Bond honor roll is studded with Marine Corps activities that have hit a perfect record in their bond programs. This is a further reason for expecting the participation of the Marines in the December 7, 1943, bond sales to prove extraordinary. At the USMC Air Station at Mojave, California, the officer personnel recently registered 100% participation in the bond allotment program, with an average investment of 15.7% of their pay. Likewise, officers and men of the Marine Corps Base at San Diego have gone on record as enthusiastically supporting the bond program, while other high-standing Marine units are Camp Elliott, Dept. of Supplies at Philadelphia, USMC Quartermaster Depot at Richmond, and Parris Island.

Participation by the Marines in the War Bond Program has been officially approved by the Commandant, Lieutenant General Thomas Holcomb, who said recently:

"War bonds not only provide an added opportunity to serve the nation in prosecuting the war, but they provide the best possible means of laying aside funds for the future. I urge all Marine Corps personnel to avail themselves of this opportunity, and I am confident that, should postwar economic readjustments bring financial difficulties, the Marines will, as usual, 'have the situation well in hand.'"

Judging by the War Bond record of the Marines in the past, as well as the increasing popularity of the bond program with the entire Marine Corps, it is expected that their participation in Pearl Harbor, 1943 sales will prove that they really do have the War Bond situation "well in hand."

Lieutenant Colonel Mangrum was awarded the Navy Cross for the part he played in the early part of the Guadalcanal campaign as the leader of a Marine Scout Bombing squadron. Commanding a Navy and Marine striking force of 16 planes, he and his fellow pilots turned back an enemy task force of surface vessels that was attempting to attack our beachhead, causing them to abandon their mission with heavy loss. He is the high type of Marine flying officer whom the young pilots may well hope to emulate. At present he is Officer in Charge, Aviation Cadet Regiment, Naval Air Training Center, Corpus Christi, Texas.

"HAVING been appointed Second Lieutenants, United States Marine Corps Reserve, and Ensigns, United States Naval Reserve, you do hereby accept such appointment, and solemnly swear. . . ." .

"I do" is chorused in unison, graduates step up to receive their wings from the Commandant, the last strains of *The Star Spangled Banner* die away—then "Officers dismissed." A cheer breaks out; there is a good deal of mutual back-thumping and demonstrative pride from relatives, friends and sweethearts, while the dignity of newly commissioned rank suffers temporary dislocation. The week's entering class of cadets looks on with some wistfulness, probably. They have fifteen more weeks to go. As they march off, the newest group of Naval Aviators scatter to get their orders, pack, check-out and depart for new stations in rapid sequence. In a short time they will take their places in the squadrons of the Marine Corps and Navy.

Twice a week, every week in the year, these graduations take place at the two great Naval Air Training Centers in Corpus Christi, Texas, and Pensacola, Florida, which together form the Naval Air Intermediate Training Command. Thousands of Naval Aviators have gone before this week's classes and new thousands will follow in steady procession, each of them as well or better trained than his predecessors, until the job of Naval Aviation is accomplished in every theater of war.

With few exceptions, the great majority of our Marine Corps aviators went through the training mill as Naval Aviation Cadets. The exceptions will be described further along. The story of how the Marine Corps obtains its

Above: Selection Board chooses cadets who will become Marines. Colonel Mangrum, senior member, is at head of table.

aviators is then the story of the Naval Aviation Training Program.

In 1935 the new rank of Aviation Cadet was created for the Marine Corps and Navy. Accepted applicants served for thirty days at one of the Naval Reserve Aviation Bases as Privates First Class and Seamen Second Class. Ten hours of dual instruction was designed to eliminate the unfit, then to Pensacola for the full Naval Aviator's course in the newly created rank. Until 1939 the graduated Naval aviator served with Marine Corps and Naval aviation still as cadets. At that time the law was modified to permit conferring of commissioned rank upon graduation. In 1941, the program took on its present form whereby all candidates enter and serve throughout the training period as Naval Aviation Cadets. A certain number are selected and commissioned in the Marine Corps Reserve upon graduation. In this respect, the procedure closely parallels the method of commissioning certain graduates of the Naval Academy in the Marine Corps.

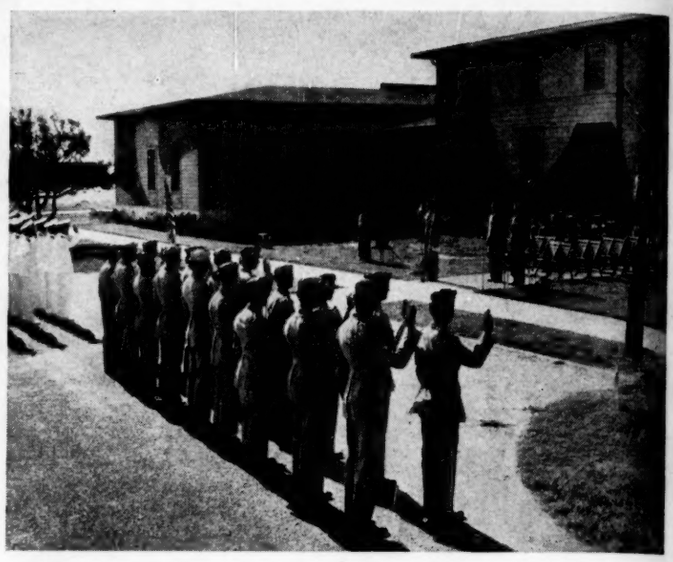
At the inception of the cadet program in 1935, the educational requirement was a minimum of two years of college work, with preference given to those who had degrees. The undergraduate applicant was required to qualify in a certain minimum of college mathematics. The demand for large numbers of new pilots necessitated the reduction of these requirements in 1941 so that, at the present time, the applicant for aviation training need be a graduate of an accredited high school only. The age requirement has also been reduced from 20 to 17 years. The maximum age limit remains the same, 26 years.

ON the day John Doe enlists in Class V-5, U. S. Naval Reserve, he would do well to consider the lowly sponge. As Cadet Doe he will be expected to absorb prodigious amounts of training and instruction into the tissues of his brain and muscle and nervous system, or face the wash-out board. Lessons learned in the school of combat have been added to the traditional subjects he must master and have heightened the importance of them.

The first few months of his training will be spent in the indispensable *preparation* for flying, at Flight Preparatory School, designed to fill educational gaps, and make him ready for specialized technical instruction, so that, in the end, the man is master of his machine and not the servant. The Navy has taken over in part a number of colleges for this purpose.

The next step in the program is taken under the Civil Aeronautics Authority—War Training Schools—where he will spend two or three months. It is here that he has his first contact with flying, an indoctrination involving dual instruction and solo in light planes which is conducted by civilian operators under the supervision of Naval Aviators. It is here that the romance of flying ends, with some of the mystery and wonder brushed off, and the honeymoon begins. Cadet Doe will begin, at this point, to speak familiarly of his love in aviator's terminology.

The honeymoon is over when the cadet arrives at Pre-Flight School, following the interlude at the War Training School. He will undergo three months of rigorous physical conditioning, military training, and ground study. Out of the boxing, wrestling and running; out of the team sports,



Colonel Mangrum administers the oath to new Navy and Marine pilots.

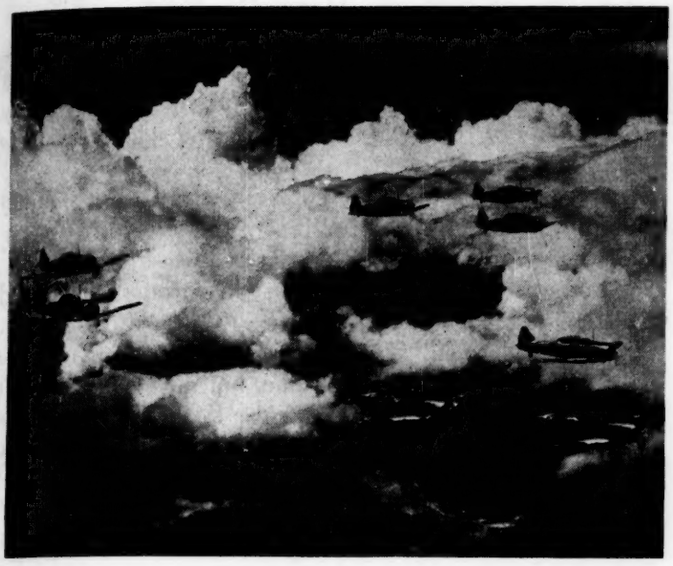
hand-to-hand combat, obstacle courses, the hiking and swimming, he will develop a tough agile body and an aggressive spirit. Drill and rigid application of the rules of military conduct will mark him with the smart, alert manner of a man who understands self-discipline. Cadet Doe can use plenty of self-discipline from here on in. His ground studies, which begin at flight-prep and continue throughout the remainder of his training, are a test of his self-discipline as well as his ability to learn new skills.

Navigation, communications, ordnance and gunnery, aerology, seamanship, first aid, and recognition of vessels and aircraft make up the curriculum. The Navy has set up Pre-Flight Schools to handle this three-way program of study, drill, and conditioning in five locations throughout the country: St. Mary's College in California, University of Iowa at Iowa City, University of Georgia at Athens, University of North Carolina at Chapel Hill, and the Del Monte Hotel on Monterey Bay, California.

From the Pre-Flight School, Cadet Doe makes the frying-pan-into-the-fire transition at one of fifteen Naval Air Stations which comprise the Naval Air Primary Training Command. This is his introduction to Naval Aviation proper. This is where he will take a three months' course composed of many hours of dual instruction and solo flying in the "yellow perils," the yellow-painted N3N's and N2S's. Precision work, the key to the Navy's method of flight instruction, is impressed upon his mind like a watch-word, and upon his muscles like reflex action.

Acrobatics, night-flying, and formation flying are introduced during this period, and ground school continues with the additional subjects of aerodynamics, airplane structure, engines, propellers, and accessories, drill and more drill in radio code, blinker and semaphore, recognition, and dead-reckoning navigation. Military drill and athletics continue to round out the working day.

Then John Doe will pack his sea-bag once again and move to another green field in Corpus Christi or Pensacola for Intermediate Training. Basic training in the Vultee-built intermediate trainer, the SNV, will take him through much of the same flying he had at Primary, but this time



Formation flying in SNJ's is part of intermediate training for future fighter, scout bomber and torpedo bomber pilots.

in a low-wing monoplane, higher powered and radio-equipped. Then to the Instrument Flying Squadron for a comprehensive course in flying by reference to instruments alone. Many pilots in the combat zones owe their lives to their ability to fly by instruments, using clouds to shake the Zeros off their tails. The mill grinds on.

IT is here that Cadet Doe applies for commission in the Marine Corps Reserve, and he may indicate his preference for fighters, dive-bombers, torpedo-bombers, observation, patrol-seaplanes or land-based bombers. Selections for the Marine Corps are made in such numbers as authorized; followed by the same token with selections for advanced training in such numbers as may be required in the type of aircraft listed above. Not all cadets who want to be Marines can be accepted. Not all cadets can get their first choice for specialized training. You can't please all the people all the time.

In the intermediate specialized squadrons, the cadet, for the first time, is concerned with more than merely flying his plane. Gunnery, both fixed and free, bombing, cross-country navigation, over-water navigation are included in the syllabus. The PBY for patrol-seaplane training and the OS2U single-engine seaplane are the only service-type airplanes used in the Intermediate Training. The twin-engined Beechcraft landplane (SNB) is the prelude to land-based multi-engined craft, and the North American low-winged monoplane (SNJ) foreruns the carrier-type craft to be flown after graduation.

On the ground Cadet Doe reviews or takes advanced work in everything that has gone before. In addition, he studies some new subjects: celestial navigation, gunnery training, sighting, weapons, oxygen, Navy Regulations and Administration, tactics. There is a time in every day for close-order drill or athletics. Taut observance of military procedure in the cadets daily regime is intended to work as a guarantee that Cadet Doe will become a responsible officer and dependable team-mate in combat.

The government provides and pays the premiums on $10,000 worth of life insurance for Cadet Doe's beneficiary. The cadet himself is beneficiary of another kind of life-insurance provided by the government: a thorough and realistic training for air combat. He pays his own premiums in earnest concentration on his work. He can proceed thence forward about his business as an officer and aviator in the U. S. Marine Corps Reserve or Naval Reserve in full confidence that there has been no stone unturned along his way, either by himself or those who trained him. But the newly commissioned aviator is not yet ready for a combat unit. Just as the young M.D. must serve his time as an interne before he is ready to practice, the young Naval Aviator must serve his time with the Operational Training Command before he is ready for action. Here he will use the fighters, dive-bombers, torpedo-planes, multi-engined service type bombers, and patrol craft that he will eventually fly in combat.

FOLLOWING a brief interlude, in transit from Intermediate Training to Operational Training, the new aviator discovers that he is still, alas, just a boot. Student officers lead the same by-the-numbers existence they had as cadets, although the horizon has expanded once again. Second Lieutenant Doe gets a fast, powerful airplane to fly, and he must master its characteristics with the same precision required throughout Naval Aviation training. More and more gunnery and bombing, more navigation, and combat tactics, school and more school fill the days.

In the Intermediate Training Command there are considerable numbers of instructors, both Marine Corps and Navy, with combat experience to influence the pilot's training. In the Operational Training Command there are a great many more who drive home the lessons of personal experience, who instruct in battle-tried methods, who point out pit-falls and inject realism.

Finally the aviator is given the blessing of the Naval Aviation Training Program and, with his orders in hand, the Second Lieutenant reports in to a Marine Corps Air Station for assignment to a tactical squadron. A boot once more: this is his first service with the Marine Corps and no one is particularly impressed with him! The record says he is an officer and a Naval Aviator, but he has a professional reputation yet to earn. His squadron commander has to decide how soon he can be considered a part of the unit, whether his flying ability is par, or above, and judge him on a basis of dependable headwork and adequate discipline.

Flying with his squadron provides him many more hours in the air, essential seasoning, and development of teamwork. Then one day he is a boot no longer—he is ready for combat. He has learned how to use his weapon, the airplane, with the same trained accuracy as the Marine on the ground has learned to use his rifle, and to bring it and himself back from every combat mission so that he can use it again and again and again.

The combat record of new aviators in the Marine Corps speaks for itself, for the quality of the individual, and for the quality of the training course.

I mentioned earlier that not all of the aviators in the Marine Corps (and Navy) come from the ranks of Aviation Cadets. A limited number of officers, regular and reserve, and a limited number of enlisted men, regular and reserve,

are accepted for flight training each year. The former are designated as Naval Aviators and the latter as Naval Aviation Pilots upon graduation from the training course. These particular flight students enter training, as a rule, at a Pre-Flight School or they may go direct to Primary Training at the Naval Air Station, Dallas, Texas. For Intermediate Training all of them go to Pensacola. Many of the enlisted flight students are commissioned after graduation.

Another opportunity for enlisted men to receive flight training is presented by means of appointment as Aviation Cadet. The numbers authorized are prescribed by the Navy Department. Selected applicants are discharged, re-enlisted as Aviation Cadets, Class V-5, USNR, and ordered direct to Pre-Flight School.

Every graduating group at Corpus Christi or Pensacola contains veterans of Pearl Harbor, of Midway or Guadalcanal, of sea battles in the Central and South Pacific, the Atlantic and Africa. The wings they win are worn above service ribbons and decorations for previous jobs well done. These men know well why they are in flight training. Whether they were in aviation before or not, they know what will be demanded of them, and they attack their work with all the earnestness of which they are capable.

I don't know of any cadet who was formerly a Marine, who didn't apply for a commission in the Marine Corps Reserve upon graduation. In expansion of his simple request to be selected for the Marine Corps, one cadet wrote:

"Before entering V-5, I spent three years and two months in the Corps. Took boot training at San Diego and spent 25 months aboard the U.S.S. *Boise*. Naturally, I am very desirous and partial to becoming a Marine again as soon as possible."

Another writes: "It is my hope to destroy the maximum amount of Japs and their equipment that I can. My maximum opportunity, I'm sure, is with the Marine Corps."

Another: "I lost a good friend at Guadalcanal and would like to take his place. . . ."

And these are still other cross-sections of opinion: "I've seen Marine officers that I dislike, but never one I didn't respect." "My father served with the Fifth Marines in the last war, and he'll disown me if I'm not selected." "My cousin was a Marine on Bataan and recently reported dead in a Jap prison camp—I've a special score to settle." "Looks to me like flying with the Marine Corps is the shortest route to a fight." "I enlisted as an Aviation Cadet, V-5, USNR, because it was the only way I could get to be a Marine Corps Aviator. Please don't let me down."

Many cadets, with direct approach and strict economy of words, express everything they feel about the world and its chaotic state; everything they feel about the Marine Corps and flying in it in an incisive four-word statement:

"I want to fight."

Marine Corps Aviation

By Major General Roy S. Geiger, USMC

THE mission of Marine Corps Aviation is to furnish the necessary air support of the ground forces of the Marine Corps, and to provide a reserve from which the Navy may draw aviation units for service afloat on purely Naval missions. Therefore, examination of the tasks assigned the ground forces will immediately disclose the tasks to be performed by Marine Corps Aviation. They are:

(1) To provide the air support for the capture of advance bases.
(2) To provide the air support for the defense of advance bases until their occupation and defense is assumed by Army Forces.
(3) To furnish the air support necessary for the occupation and defense of areas for which the Navy is responsible.

It may appear, at first sight, that, in the present war, Marine Corps Aviation has been employed on missions other than those for which it is maintained. Close analysis, however, will disclose that this is not the case and that there actually has been no change of mission.

At Wake and Midway Islands, Marine Corps Aviation most ably assisted the Marine Corps Ground Forces in the defense of those far flung outposts of the Navy.

The seizure and defense of Guadalcanal presented a true and even better example of the employment of Marine Corps Aviation in support of the ground forces of the Marine Corps. In that operation, the First Marine Aircraft Wing reported to the First Marine Division and worked closely as a team until that island was securely in our possession. When the ground troops of the Marine Corps who had seized and organized the defense of Guadalcanal were relieved by Army troops, circumstances were such that Marine Corps Aviation was assigned to continue to perform the same missions for those troops as for Marine Corps troops.

Marine Corps Aviation is an integral part of the Marine Corps, and its missions are therefore essentially the same. The fact that certain temporary circumstances have arisen in this war which have necessitated its employment on like missions in support of Army troops, in no wise alters this basic fact.

"LIVE OFF THE LAND!"

The Individual Combat Section at Camp Elliott

By Lieutenant Martin J. Maloney, USMCR

With illustrations by Pfc. Harry Jackson, USMCR

ON Saturday morning, the riflemen return to their barracks at the Training Center, Camp Elliott, California. Because of basic habits gained during weeks of training, they march with a certain snap; but it is easy enough to see that they are dog-tired, extremely dirty, bearded as veterans of Guadalcanal, hungry, hot, and irritable to a high degree.

These men have just been through the first week of their instruction in the Individual Combat Section, a specialized school for infantrymen initiated by direction of Brigadier General Matthew H. Kingman, USMC, commanding general of the Training Center. The Individual Combat Section has been placed in charge of Marine Gunner Charles H. Withey, USMC, the man who has carefully planned this unique course with an eye to making men hot, tired, hungry, irritable—and able to survive the rigors of tropical climate and terrain as fighting Marines.

"My men are never worth the powder to blow them up until they have an inch of beard and you can smell them a mile off," Gunner Withey says.

The term "individual combat" applied to this school is likely to deceive many persons, who conceive of "individual combat" in terms of judo, which the school does not attempt to teach, and knife fighting, which is taught as a useful corrective exercise.

"'Individual combat,' as it is taught in our school," Gunner Withey comments, "is an attempt to apply to the individual rifleman all the advice we can derive from the experience of our light infantry in combat."

The training missions of the Individual Combat Section are based upon special circumstances and combat experiences of our troops in the operations of our forces against the Japanese in the South Pacific theater, as follows: first, that in the South Pacific area, riflemen are forced to fight as individuals or as members of relatively small groups; second, that riflemen must be able to fight and survive by themselves, without much aid or protection from the larger units to which they may be attached. A third, subsidiary assumption upon which the schooling is based may be stated after this fashion: most of the men who come to the Individual Combat Section for training are infected with thoroughly false notions, derived from books, magazines, newspapers, and motion pictures, concerning the climate, terrain, vegetation, and natives of the Southwest Pacific area. To eliminate these false notions; to give each man the skills necessary to fight and live by himself, if need be, in the Pacific islands or on the mainland; above all, to give each man confidence in his own skill and hardihood: these are the primary purposes of the Individual Combat Section.

"I remember the first time I got off a boat in a port in the tropics," one instructor said. "I didn't know what to expect, or what to do, or how to take care of myself. I was like a fish out of water. We want to spare these men that experience, if we can."

This theoretical basis for training infantrymen is founded solidly upon good authority. Intelligence reports, as well as the advice of successful combat leaders, indicate that individual movements and movements of small patrols are all-important in jungle fighting. Men are easily cut off from the larger units and forced to subsist by themselves, sometimes for long periods of time. The visual control of troops is nearly impossible during the day, except from high points in the terrain; and at night, there is either physical contact to hold men together, or no contact at all. Yet all effective reconnaissance in jungle fighting must be made from the ground. In the very nature of things, small patrols thus become mandatory. These patrols must be self-contained and self-protecting; they can expect little aid or protection from larger units.

THE school arrives at its results by teaching an unusual but useful list of subjects, which it manages somehow to cram into two weeks of hard work. Security in movement and security in bivouac lead the schedule, with concealment of individuals in movement and bivouac immediately following. An individual or very small patrol operating in enemy territory must rely on concealment and the most precise security measures for protection, rather than on firepower; and so the riflemen spend hours and even days of training in learning to crawl over every kind of ground—

gravel, dirt, rock, spongy ground, brush, to mention only a few. And most men, by the time their two weeks are over, acquire a high degree of proficiency in concealment and unobtrusive movement.

Methods of orientation without map or compass play an important part in the training schedule; and here, as elsewhere in the work, only improvised tools are used. The Marine who serves in the jungle cannot count on having the latest type of equipment always at his disposal. Then comes the study of the small patrol, its organization and its methods of operation. The men are trained, as prospective members of such patrols, to regard with unlimited suspicion any terrain feature which might provide cover for an enemy sniper or ambush. As much training as time will permit in the care and use of the eyes at night is included in the schedule. The men learn a little of the physiology of night sight, and are instructed in the most satisfactory method of using their eyes to reconnoiter a given area in the dark hours. They are taught, for instance, to allow their eyes to rove effortlessly over the terrain which must be watched, sensing rather than seeing any movement or alien object; to avoid staring directly at the object they wish to discern, and instead to watch it from the corner of the eye. Finally, a course in general trail lore and the nature of growth in the tropics is given, illustrated with paintings of tropical vegetation which have been carefully checked for accuracy of form and color.

Hand-to-hand combat is taught in the school, but less as a means of fighting than as a useful exercise. The men receive instruction and some practice in the use of the knife, the chief value of which lies in its corrective effect upon clumsiness, slow thinking, and poor coördination.

"Probably not one in ten of these men will ever have to fight an enemy with knives," Mr. Withey comments. "Still, it's good exercise for them, just as fencing would be, and it's always an ace in the hole."

Knife fighting is taught in the school in accord with the principles of good swordsmanship, applied to broken ground rather than the padded floor of the fencing hall. Marine Gunner Withey, himself a fencer and former instructor in the epee, has been able to work out a usable system of fighting, which is fast, dangerous to an opponent, and much dependent on good footwork.

Though the school does not expect to make skilled knifemen out of trainees, instruction in the weapon is violent. The men use wooden "knives" for practice, are encouraged to practice as if they were fighting for their lives. Only throat and face slashes are banned, because of the danger to the eyes. Failure to use the practice knives with enough vigor generally leads to disciplinary action; but the threat of punishment is seldom necessary to urge the men on. The example of instructors—several of whom bear scars from their practice bouts—in demonstrating the use of the weapon seems to be enough.

No disarming or throw-holds are taught in the short time available for learning; such instruction would be more likely to confuse the men than help them. Moreover, the instructors in the Individual Combat Section are of opinion that most of the disarming holds currently taught would prove useless against a fairly skillful knifeman.

Nor is much time devoted to "judo." To attempt to teach men judo in two weeks, instructors believe, would be like trying to make them skilled wrestlers in two weeks: the instruction would make them less effective instead of more so. Instead, the school teaches two series of "damaging blows"—simple sequences of strokes that are easily mastered, could be deadly if properly applied. Even these blows are not practiced, since the successful use of them would mean serious injury or death to the subject on whom they were tried.

Men are advised never to wrestle with an opponent, never to get off their feet in fighting him. A man who stays on his feet is capable of delivering a decisive blow which will end the fight; a man who "goes to the mat" gives up this considerable advantage.

THE method of instruction in these subjects is a departure from customary procedure. All lectures—short, to-the-point, much illustrated—are packed into a small segment of the first week. Time saving expedients, technique of instruction are emphasized and intensified. These lectures are normally given in the field, and followed by the maximum amount of practical application. On the second week, troops are taken into the field on Monday morning, are assigned an area and a problem which involves the

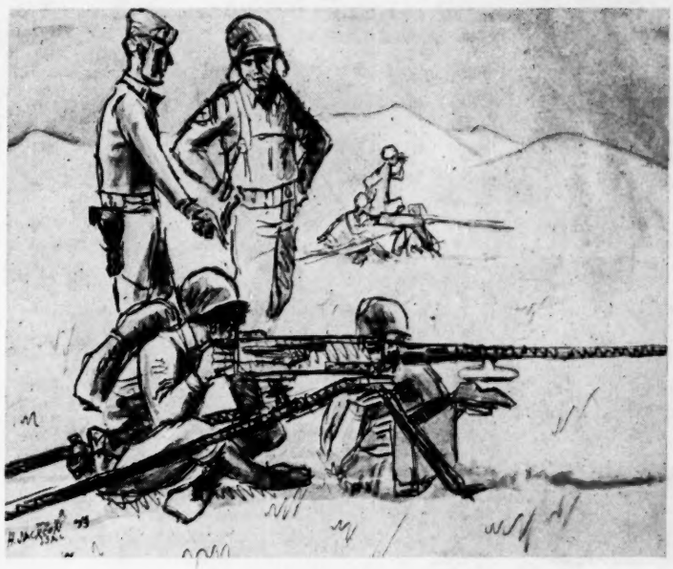
maneuvering of combined patrol groups. The men function on their own initiative for five days. The problems are designed to furnish an application of all that has been taught them to that point.

SOURCES of the doctrines taught in the Individual Combat Section are varied. The organization and tactics of small patrols have been taken from the teachings of marine raider battalions. Doctrine on concealment is Marine Gunner Withey's own work, developed from the personal experience of himself and his instructors, plus the experience of combat leaders in the Pacific area. Mr. Withey has prepared lecture outlines on concealment for the use of his instructors; and these he is rapidly turning into pamphlet form for the use of his students. The fine points of living off the country are drawn from intelligence reports from the Southwest Pacific and from reports of the Smithsonian Institute, plus personal experience of instructors, corrected by careful reference to Hill's *Economic Botany*. This work, a study of natural crops throughout the world, has been carefully checked by the instructing staff over a period of years against the natural crops found in the Pacific islands. Added to this doctrine is a short course in improvised methods of catching fish, and in the recognition of poisonous or inedible fish, derived from much the same sources. The men are also taught construction methods used by natives in the islands—for instance, how to make a gaff or spear for fishing.

Much of the content of courses taught by the Individual Combat Section is derived from the personal experience of instructors, most of whom have seen long service in the Pacific area. Marine Gunner Withey lived for four years in the Society Islands prior to his enlistment in the Marine Corps, and since enlisting he has served three years with the Asiatic fleet. Marine Gunner Larry D. Parker has had twenty-three years' service in the Corps, in nearly all stations, with seven years' service in the Far East. Gunnery Sergeant George F. Hyland spent three years in a small outpost in the Hawaiian group. Gunnery Sergeant Carl Green has had three years' service in the Philippines and on the Asiatic station. Gunnery Sergeant W. L. Patrick has a similar record of Pacific service.

Along with the specific instructional content of courses, the instructors of the Individual Combat Section try to teach certain psychological attitudes useful to Marines in combat.

"The great American fault," Marine Gunner Withey says, "is that we have lived too well in recent years, so that we lack patience, perseverance, and conditioning to hardship. Consequently, our enemy in the Pacific has the advantage over us, despite his inferiority to us in weapons, equipment and technical skill. The course in individual combat is designed to correct this fault, insofar as it can be readily corrected. The course is deliberately unpleasant."



"Deliberately unpleasant" is not an overstatement. During their first week, while the men are in the field, from Monday to Friday they get no food, no water, no rest between 0730 and 1630. From 0730 on Friday to 0100 on Saturday, they get no water, but are allowed three sandwiches during the afternoon.

During their week in the field, the men are issued one canteen of water, one pound of fresh meat, one half-pound of bacon, four potatoes, two carrots, two onions, and some biscuits or a half-pound of bread for a two and one-half day period. Cooking is done individually, after dark and before daylight, in accord with the rules of camouflage discipline. No additional water is provided for cooking, or for the relief of the improvident. No man is permitted to leave the field unless serious damage to his health will result if he does not leave.

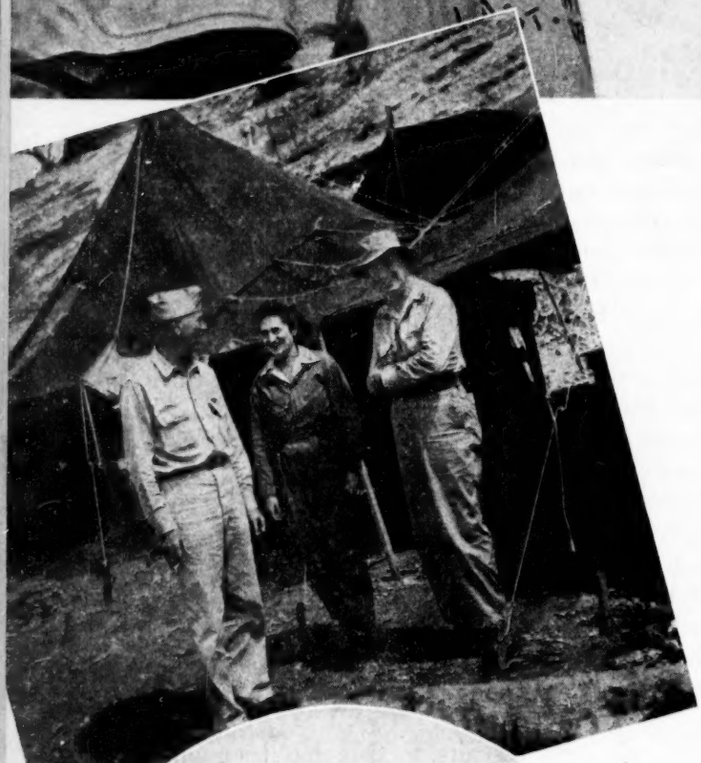
The only field casualty to date has been one NCO, who was bitten by a centipede. He thought the creature was a caterpillar. Out of his discomfort, of course, has come a splendid "horrible example" for students who have followed him; for his class had been lectured fully the day previous to his accident on the subject of poisonous reptiles and insects of southern California.

"In the short space of the time allotted to us," one of the instructors remarked, "we try to turn out men who can fight and survive in wild, tropical country, in the most difficult of climates, against a very dangerous enemy. We believe and hope that we're doing a fair job."

I believe that through men's sacrifices peace shall come and may come. But I know that by the sword alone it will not come and cannot come.—*Archbishop Francis J. Spellman.*

Four Marine dive bomber pilots talk over how they just sank two Jap ships in the South Pacific. They are *(left to right)* First Lieutenant Augustus L. Arndt, Captain James A. Etheridge, Captain Robert O. Brown, and Captain Jack Cosley.

AVIATION SCENES FROM MUNDA



← Lieutenant Shikoski welcomed by Major General Francis P. Mulcahy, USMC (right) and Colonel Fiske Marshall, USA. General Mulcahy commands Marine aviation at Munda.

Lieutenant Dorothy Shikoski, an Army nurse, the first American woman on New Georgia after its capture from the Japs. She arrived in Marine hospital plane to aid evacuation of wounded. Here she inspects shattered Jap dive bomber.

↓ Jap planes destroyed on ground during taking of Munda.

The Capture of Munda

By Captain Charles Mathieu, Jr., USMC

ALMOST a year—to the day—after U. S. Marines captured Henderson Field on Guadalcanal, American forces seized Japanese-built Munda airfield on New Georgia.

Actually the enemy had no chance to use Henderson Field as perfect timing took it away from them just a few days before it was scheduled to be completed. Once captured, the field remained in our control.

Munda airdrome was never used by the Japs for anything more than an emergency landing field. Continual bombing and harassing by American bombers from Guadalcanal kept Munda virtually inoperative since last December.

The seizure of Munda involved a good deal more fighting than the capture of Henderson Field. For months on end while Americans fought to hold Guadalcanal, Japanese built strongholds around Munda runway.

Once secured, Guadalcanal became a stepping-off stone for further attacks northward in the Solomons.

Ships laden with supplies anchored off Lunga Point, and ammunition, food, equipment and troops were placed ashore at Guadalcanal.

Attacking Jap planes, sometimes in flights as large as 100 dive bombers and fighters, did their best to damage shipping and supply areas on Guadalcanal, but seldom did they penetrate protecting American fighters.

In February, American forces occupied Japanese evacuated Russell Islands between Guadalcanal and New Georgia. Ammunition and supplies also were stored on the Russells—approximately sixty-five miles from Henderson Field on line with Munda. Fighter strips were built there; increasing the range of our planes that much more.

Advantage was taken of all opportunities.

On the night of June 29-30, American Naval forces converging off Guadalcanal headed northward.

Employing the important element of surprise, American soldiers and Marine jungle fighters at dawn rushed ashore at three strategic locations on New Georgia.

The main landing was made on Rendova Island, only seven miles across an inlet from strong Japanese positions on Munda Point.

Army patrols the next day were already on the mainland of New Georgia, establishing a beachhead where reinforcements could land and ultimately push down the coastline to close in on the Jap built airfield.

Again, the enemy brought into play his bombers and fighters to destroy our installations and again our fighters prevented their potential effectiveness.

Marine Raiders landed at Rice Anchorage to the North of Munda and worked their way toward the field despite extremely difficult undergrowth and rough terrain. This move closed off enemy supply routes to Vila, on Kolombangara, later to be abandoned by the Japs and occupied by American troops.

This writer spent days on the front lines, witnessing the hardships and difficulties encountered during this fierce battle.

Our forces employed every type of modern weapon to quicken the pace, but jungle warfare must be fought inch by inch.

For months our planes had bombed and strafed these enemy positions and they continued to do so until the last day of the fight.

Batteries of huge guns poured round after round of high explosives into the area. On several occasions naval ships had blasted Munda with salvos of shells.

However, the Japanese had spent months on fortifications which had to be knocked out one by one.

Usually these strongholds were called pillboxes and were constructed of coconut logs and coral blocks. Some of the stronger built pillboxes were two stories deep. If they were being bombed or shelled the Japs would drop through a trap door into the lower level, about fifteen feet underground. Pillboxes of this type will stand anything but a direct hit.

On the front lines at one of our heavy machine gun positions, I saw five of these pillboxes still occupied by the enemy in one area alone.

The machine gun was located on a hill that was taken earlier in the day and the position offered an excellent observation point. The terrain to the immediate front dropped sharply and levelled off leading into the Lambeti coconut plantation.

Japanese-held Munda Airfield was approximately 3,000 yards to the front.

Our mortars, dreaded by the Japs, were constantly pouring shells into the enemy in the valley ahead.

Occasionally individual Japs could be seen moving through the bushes and the machine gunner would let go a burst, keeping the enemy pinned down.

Marine light tanks proved very successful against these strongholds during the entire operation.

The constant roar of artillery and mortars made it impossible to sleep at night. In addition the Japs used night harassing tactics.

Most of the night fighting was done with knives and machetes. Muzzle blast from rifle fire at night gave away positions and locations of troops.

During the night men rested in foxholes three or four feet deep. Usually there were four men in a foxhole, sometimes less.

Japs sneaked in pairs towards the foxholes. One would often jump into the middle of our men and try to stab them. The other stood by to see the outcome.

Sometimes the Japs would jump in the foxhole, and then jump out quickly, hoping our troops would become excited and stab each other.

"They must have springs on their feet," one soldier said.

Men lived on cold rations for days at a time while they were fighting. I talked to some on one occasion who were enjoying hot coffee and doughnuts, the first hot food they had in twelve days.

Their food consisted mainly of C rations (canned meat, biscuits, candy, powdered coffee or lemonade) and D ration (chocolate bar).

The division responsible for capturing the field closed in from all sides.

When I reached the front shortly after noon on August 5th, ten Marine tanks were just moving out of their bivouac area toward the field.

Kokengolo Hill, in the center of the field and commanding the area, was still in Japanese hands.

The hill itself is solid coral and some of the strongest Japanese fortifications were found there. Tunnels burrowed in the side of the hill stood direct hits from our large bombs. These tunnels had as much as thirty feet of coral over them for protection.

I climbed to the top of steep Bibilo Hill, at the foot of the strip and witnessed the entire action.

The tanks lined up at the bottom of Kokengolo Hill and pounded the Japs with 37mm. shells and machine guns.

Puffs of smoke rose from the side of the hill as the tank shells hit their targets. The cackle of Japanese heavy machine gun fire echoed across the field.

After each Marine tank had emptied 110 rounds of 37mm. shells into the Jap positions, Army infantry units rushed up the side of the hill.

In a matter of minutes the hill was secured.

I worked my way down the side of Bibilo Hill and headed for Kokengolo, only a few hundred yards distant.

As I walked down the center of the bomb-battered strip, a soldier approached from the opposite end riding a Jap bicycle.

It was a strange sight, dead Jap bodies lying on the field, the sound of machine gun and mortar fire in the distance, and this soldier riding a bike down the center of the strip.

Japanese planes of every type were strewn along the side of the field and in revetments. They were battered and punctured by thousands of bomb and shell fragments.

On approaching the hill I noticed a group of soldiers standing at the entrance of a tunnel. Six Japs were still inside and refused to surrender. Sticks of dynamite were used and the Japs were blown to bits.

One soldier approached me with a Japanese light machine gun.

"I had a tough time taking it away from the Jap, but I finally got it," he said.

Still excited from battle he was anxious to demonstrate the Jap weapon to me, but couldn't make the magazine fit in its proper place.

Four of our P-40 Warhawks zoomed the field; a sign of victory.

Within a few days a Seabee construction battalion had worked the field over well, filling in large 2,000 pound bomb craters with bulldozers and packing it down with heavy rollers.

Let the Japs build more Henderson and Munda airdromes—we'll use them.

New Marine Air Chiefs

BRIGADIER GENERAL LOUIS E. WOODS, USMC, has been appointed Director of Marine Corps Aviation, replacing Major General Roy Geiger, USMC, who is now on duty in the field. Brigadier General Woods was formerly Assistant Director of Marine Corps Aviation.

Brigadier General Woods commanded all Army, Navy, and Marine Corps aviation units based on Guadalcanal for a month and a half during the late fall of 1942. During this period his force accounted for a total of 22 Japanese surface craft sunk and 65 planes destroyed.

For his action on Guadalcanal, General Woods received the Distinguished Service Medal. He also has the Expeditionary Medal for service in Haiti in 1924-25; the Haitian Order of Honor and Merit with rank of Chevalier.

Colonel William J. Wallace has assumed command of Marine Fleet Air, West Coast, succeeding Brigadier General Lewie G. Merritt, who recently was detached for overseas duty. Executive Officer to Colonel Wallace will be Colonel Stanley E. Ridderhof, former Commanding Officer of Personnel Group, MCAD, Miramar, Calif.

A veteran of more than 26 years in the Corps, Colonel Wallace has served as Chief of Staff to General Merritt since February of this year. In addition to regular duties, he held a similar post with Major General Roy S. Geiger at Guadalcanal during the vital months of September and October, 1942.

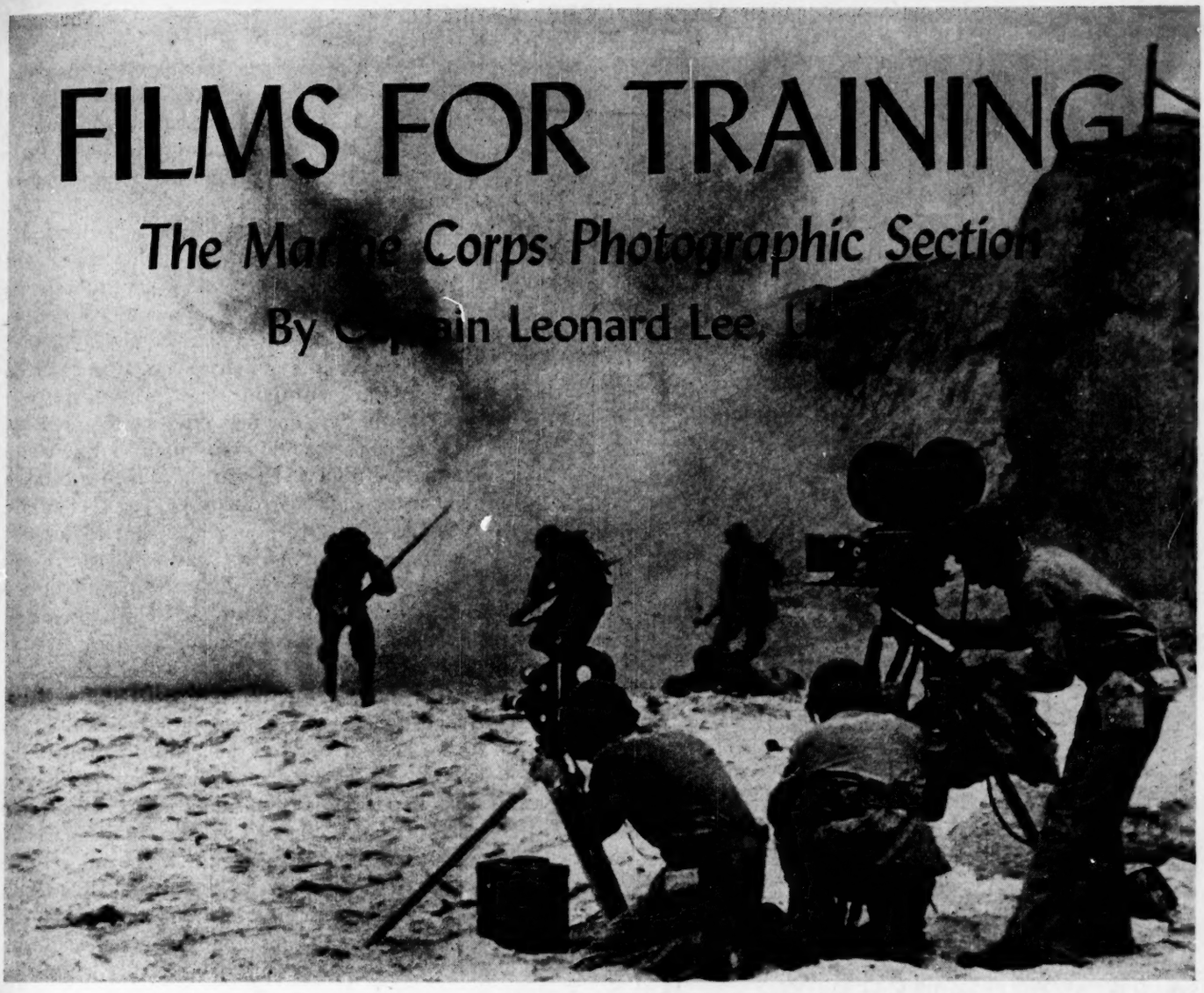
For his outstanding staff work in the Solomon Islands campaign, Colonel Wallace received the Legion of Merit.

THE IDEAL OFFICER is not afraid of anything—not even of a new idea.—*Under Secretary of War Robert P. Patterson.*

FILMS FOR TRAINING

The Marine Corps Photographic Section

By Captain Leonard Lee, USMC



Photographing a landing attack (from MTF-9, *Classification, Marine Corps*).

ONE picture is worth 10,000 words. So Confucius is reputed to have said many centuries ago, and the job being done by the Marine Corps Photographic Section would seem to indicate that the old Chinese sage definitely knew what he was talking about. In the scope of its activities, the increase in its personnel and equipment, and the distribution of its productions, the Marine Corps Photographic Section has grown by leaps and bounds to meet the demands made upon it in the present war.

The section was organized in November 1940 by a directive from the Commandant of the Corps, and originally consisted of one officer and two NCO's. During the next year and a half its growth was slow but steady, until in April 1942 there were approximately twenty officers and men engaged in various types of photographic activity. At that time Lieutenant Colonel (then Captain), Franklin Adreon, Jr., USMC, was appointed Officer in Charge. In the year and a half that followed, the expansion in production was so rapid that the current strength of the section totals 265. Paralleling this growth there has come an even more rapid expansion in the activities and scope of the section, and, last but by no means least, in motion pictures, slide films, and still photographs produced and distributed.

The peculiarly specialized demands of the Marine Corps Photographic Section required that its Officer in Charge combine not only knowledge and experience of the Marine Corps, but also a thorough working knowledge of still and motion picture production in all its various branches. Colonel Adreon had served in the regulars and reserves, and in the line as artillery and infantry officer, as well as photographic officer. But in addition to this, upon reporting from duty with Marine field artillery in Iceland, he brought to his new post years of successful experience as a writer and producer of motion pictures in Hollywood. The greater percentage of the officers and men serving under Colonel Adreon in the section are specialists, who, before receiving their Marine indoctrination, learned their skills in the various motion picture studios.

For an all over look at the activities of the section, it might be well to break down the work done into three main divisions, motion pictures, slide films, and still photographs. Although the work interlocks between many of these departments, each of them covers a specialized field and presents varying types of problems.

Motion Pictures

THIS, the largest activity of the section, embraces the production and distribution of motion pictures, with

Lieutenant Colonel Franklin Adreon, Jr., Officer in Charge, Photographic Section.

special emphasis on training films. In order to realize the complexities involved in the production of such a training film, let us follow the progress of a typical one from its inception to its final showing.

Either by a directive from the Commandant, or originating from needs found in training, the project is approved and passed on to the Marine Corps Schools at Quantico, to which the Marine Corps Photographic Section is attached. The Commandant and Assistant Commandant of the schools, in consultation with the Officer in Charge of the section, map out the broad plan of the picture. Then it is turned over to a writer in the scenario department, who will write a complete scenario or "shooting script."

There is made available to the writer, both at the schools in Quantico and in the field, the best and latest technical advice and information on the subject to be filmed. Writers are constantly making field trips in search of such information; at the present time, for instance, one writer is gathering information on the amphibious tractor at the base in Dunedin, Fla., another is working on various problems of ship to shore movement at the Amphibious Base, Norfolk, Va., and so forth. Then, in consultation with the technical advisor assigned by the schools, the writer completes his script, which is then submitted for approval to the schools and, finally, to Headquarters.

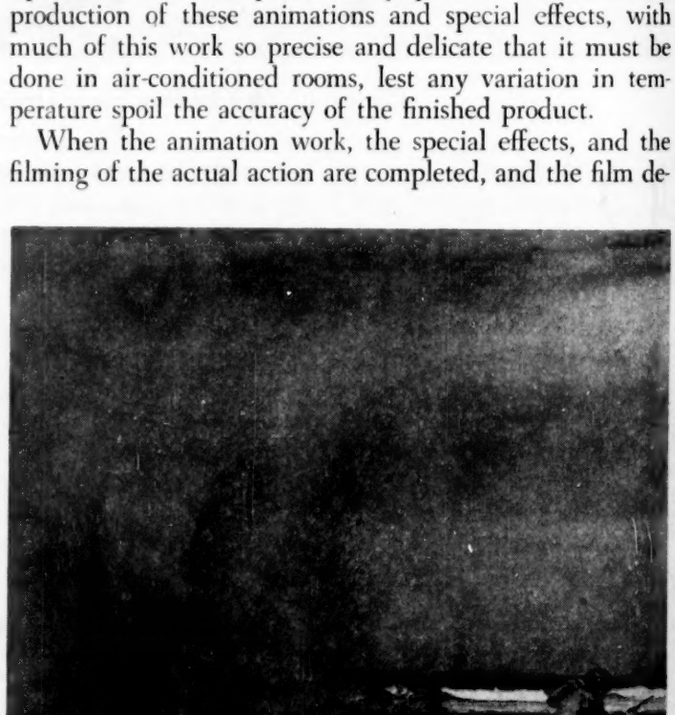
When the script has been approved it is turned over to the production department, who make the elaborate "breakdowns" necessary before the actual filming can take place. Such questions as the assignment of camera crews and directors, the locations to be used, numbers of troops and types of equipment necessary, estimated "shooting schedules," are all decided upon here. Based upon these decisions, the complete Hollywood "studio in miniature" which exists in Quantico moves into action. The carpenter shop and "grip-prop" department prepare any special equipment that may be needed in the making of the picture, such as elaborate island miniatures for use in visualizing landing operations, or the many items required in producing a film on jungle warfare. The electrical department handles the problems of lighting, field generators, and so on.

When actual production starts, the camera crews and sound recording crews carry out their highly specialized tasks, aided by experts in various motion picture branches who never appear before the camera but whose work makes up an important part of the finished production. So complex is the actual shooting of the film that, to obtain a motion picture which may run for an hour on the screen, thirty or forty days of actual filming time may often be required.

It may be of interest to mention that in all Marine Corps training films the parts played upon the screen are taken only by people of the actual rank depicted. In other words, when a Colonel is seen giving an order to a Major, the "actors" playing these parts are actually a Marine Corps colonel and a major. The Army and Navy make use of professional actors in their training films, but the Marine Corps feels that greater authenticity is obtained by having all parts played by those holding the actual rank called for.

Meanwhile, at the same time or even before the actual shooting of "live action," the animation and special effects departments are hard at work on their contributions to the finished product. Animated maps, which can graphically depict subjects impossible to film, require the highest skill and weeks of work by highly trained men, most of whom, before they donned the Marine Corps uniform, were responsible for the amusing antics of the animated cartoons. Special cameras and precision equipment are used in the production of these animations and special effects, with much of this work so precise and delicate that it must be done in air-conditioned rooms, lest any variation in temperature spoil the accuracy of the finished product.

When the animation work, the special effects, and the filming of the actual action are completed, and the film de-



A land mine bursts (from AW-6, *Combat Engineers*).

Camera and sound crews in action (from AW-8, *The 75mm Howitzer*).

veloped and printed, it is turned over to the editorial department for cutting and editing. Upon completion of the first "rough cut" of the picture, it is viewed by the heads of the various sections and officers from the schools to pass upon its technical accuracy as well as its motion picture presentation. Perhaps some point needs further stressing, perhaps additional animations or more "close-ups" are required to make certain that every man who views it will "get the word." Then, after final editing, the sound department takes over, to record music and sound effects which form so important a part of the background, as well as the commentary which teaches through the ear as the film teaches through the eye. So important is the work of the sound department that there has only recently been completed at Quantico an elaborate sound recording and dubbing room, with the newest of modern equipment, in order that all the steps which relate to the finished film may be handled by the section's own personnel.

The finished film is now shown for final approval to those concerned at Headquarters, and it might be thought that the work of the Marine Corps Photographic Section, at least as regards this one production, is over. But a motion picture, lying dormant in tin cans on a shelf, represents no contribution toward winning the war, and the task of seeing that this film reaches its audience is up to the distribution department. This is one of the most complex of the activities of the section, charged as it is with the distribution of training films and film strips from its main library at Quantico to its branches at Marine Corps bases at New River, N. C.; San Diego, Camp Elliott and Camp Pendleton, Calif., and various field units. In addition to this the main library handles the distribution of films to the field libraries of the First, Second, and Third Marine Divisions, and to the First Marine Amphibious Corps. And not only does this department take care of the films produced by the Marine Corps Photographic Section, but it also handles Army and Navy training films requested by the Marine Corps and makes available Marine Corps training films to the other branches of the service. In one month 4,043 training films were distributed by this department, with an additional 448 new films previewed for instructors of the various branches.

This, briefly, represents the progress of a training film from its original inception to its final disposition. So widespread has become the use of training films in this war that there are today almost no skeptics who any longer question the teaching ability of this medium. One of the greatest satisfactions that comes to the officers and men of the Marine Corps Photographic Section is to receive a report from those in charge of actual training at military bases, as has occurred many times in the past year, to the effect that training time for a certain operation has been cut by one-half, two-thirds, or even more, by the use of training films. In the case of instruction in one weapon, for instance, a veteran marine gunner who had looked somewhat askance and skeptical even while acting as technical advisor on the production, became an ardent film enthusiast when he re-

Filming a close-up of the breech mechanism (from AW-8, *The 75mm Pack Howitzer*).

ported that the finished motion picture, in twenty minutes, gave his classes better and more thorough instruction and a far higher average on examinations than had a much longer period in previous classroom instruction. This experience has been often reported in various forms and types of training, but it never fails to bring to those concerned in the Marine Corps Photographic Section a feeling of genuine accomplishment.

Slide Films

SLIDE FILMS, either with recorded lectures or printed lectures accompanying them, are produced by another department of the Section, in much the same way as motion pictures. Many subjects lend themselves better to this type of film, where objects or maps may be held on the screen as long as the instructor wishes, while he points out various salient features and answers the questions of the class.

Slide films have the special virtue of requiring less time to produce, on the average, than motion pictures, and can therefore be speedily made available to teach the newest techniques as they are formulated or the latest weapons and tactics in the constantly changing art of war.

Still Photographs

THE still photographic department concerns itself with the production of many types of still photos, involving a multitude of activities. Photographs for Marine Corps Public Relations, for the Marine Barracks Equipment Board, for teaching in ordnance and at the Marine Corps Schools are only some of the requirements it fills. In addition it has recently taken over the task of making identification photos for the Marine Barracks, which, involving OC, ROC, AVS, and others, amounted to making over 7,000 photographs alone in the month this article was written.

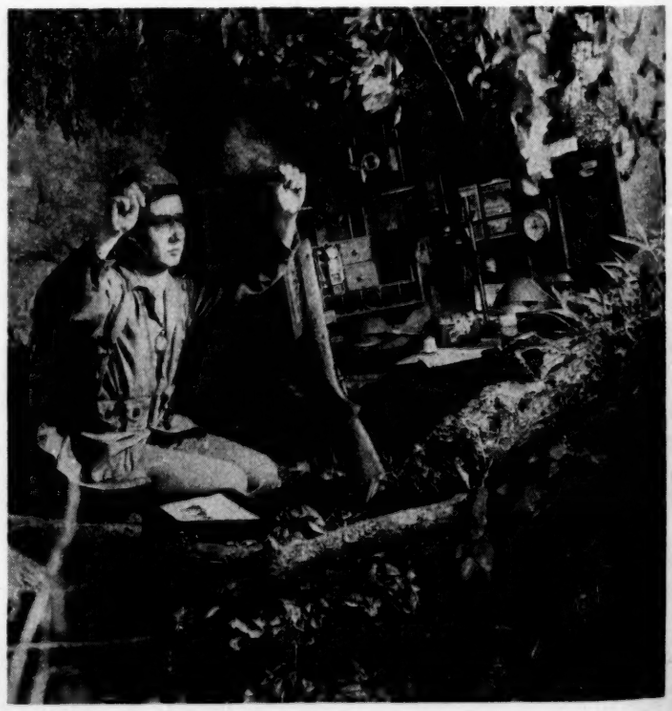
An integral and important part of the still photographic department's work consists of training photographers in all branches of still photography, developing, printing, enlarging, etc., after which they are assigned to duty with various Marine units in actual and prospective fields of combat. The photographs which appear in the newspapers and magazines with the credit line "Official United States Marine Corps Photo," are for the greater part being made by photographers who have been trained in Quantico in this school. A combat photographer must be thoroughly trained, not only in all the duties of a Marine but in taking and processing photographs under the most difficult conditions in the field.

In addition to the still photography school, the section has trained and continues to train in increasing numbers motion picture cameramen for duty in the field. When the first wave of marines landed on Guadalcanal a motion picture cameraman from the Marine Corps Photographic Section landed with them, and on every operation in which marines are now engaged, or for which they are training, motion picture and still photographers accompany them. The films and still photographs thus obtained serve many purposes; they provide training films and lessons in how to do it—and sometimes in how *not* to do it—for those still in training. They provide information on the performance of our own equipment in action and of captured enemy equipment and installations for intelligence study. They offer visual evidence to the civilian population, in the form of newspaper and magazine photographs, and in newsreels, of the actual progress at the battle front. And, when the war is over, they will provide a lasting record for study and for historical purposes of the service of the Marine Corps in the war.

West Coast Unit

BUT not all of the work of the Marine Corps Photographic Section is centered in Quantico. Last winter, with motion picture production increasing rapidly, and with a constantly growing demand for training films, it was found necessary to establish a West Coast Unit of the section, which is now based at Camp Pendleton at Oceanside, Calif.

This West Coast Unit has many advantages which cannot be duplicated in Quantico, such as perfect weather conditions for outdoor production during the major part of the



Developing and printing in the field, showing portable, self-contained darkroom and equipment.

year, large bodies of troops and equipment constantly available for either sea, land, or amphibious demonstrations, and natural terrain upon which almost any combat conditions may be duplicated. A larger and larger proportion of the actual production of motion pictures is constantly being handled by this West Coast Unit, headed by Major Robert S. Sparks, USMC.

Naturally a large part of the work of the Marine Corps Photographic Section in training films has centered on amphibious warfare. A list of productions completed and in work on this subject is available on request.

In addition to these films on amphibious warfare there have been produced several films known as intelligence summaries. These are exhaustive motion picture treatments of all the available intelligence reports concerning certain islands in the Pacific which are now, or may be in the future, considered as possible points of attack for our forces. These films contain, in the form of animated maps, charts, diagrams, etc., the fullest information as to geographical features, weather, possible landing areas, and so forth, of these islands, as well as all other points which may concern the officers in charge of an attack. Such films form an invaluable basis for equipping the officers and men of a landing force with complete up-to-the-minute visual information on every feature of the terrain where they will land. For reasons of security the names of these films are not given here, but in addition to those already completed, and others in work, a large series of them is projected.

Training Films

ANOTHER series of films, in addition to the amphibious warfare series, are the MTF's—Marine Training Films. These are generally shorter subjects, dealing with particular weapons, methods, and techniques, or with such basic matters as military customs and courtesies.

It has been a source of pride to the Marine Corps Photographic Section that almost all of their completed films have been eagerly received not only by the Army and Navy, but by such far away military establishments as those of Russia, Holland, and Brazil. Such a picture as *The Antitank Grenade,* for instance, was taken over by the Army Signal Corps, and hundreds of prints distributed for training Army forces.

Several of the films mentioned above have originated in the requests of officers who have felt the need of a certain film for use in some special branch of training. It may be mentioned at this point that the Marine Corps Photographic Section is not only willing but anxious to receive requests and suggestions for films which may be desired and for which a need is felt, and such requests should if possible be accompanied by a brief outline describing precisely what the film is to teach and what field is to be covered. It is partly through the request of officers in training areas as well as in combat areas that the section is made aware of the new and constantly changing needs for motion pictures and slide films, and Colonel Adreon is at all times glad to study and recommend the filling of such requests. Since many of the readers of The Marine Corps Gazette are precisely the officers to whom this should be of interest it is hoped that this article may serve to bring the facilities of the Marine Corps Photographic Section, and its desire to serve the entire Corps, to their attention.

A rather recent, but decidedly necessary, development of the section has been the assignment of various officers to duty as utilization officers, working with various units and branch libraries to acquaint the instructors and officers in these areas with the availability of films and the best method in which to employ them. It may perhaps surprise the reader to know that it was recently estimated, at Fort Benning, that over 85% of all instruction is visual, but a moment's reflection will show how large a part is constantly played, even without our realizing it, by visual instruction. The field problem, the blackboard demonstration, the map and chart and overlay, the demonstration of a new weapon or technique—all these, as well as motion pictures, are visual instruction. The combination of these, together with motion pictures or slide films, with the aid of a trained instructor to interpret, to present and answer questions, to sum up and drive home the lessons presented, offers the best and fastest method of thorough and complete instruction. It was to further such instruction, and to be of service to the Corps and to all our armed forces, that the Marine Corps Photographic Section was formed. Its expansion has been necessitated by the ever-increasing need for its productions, and it feels that it has made and will continue to make an important contribution to the record of the Marine Corps.

Plight of the Sparrows

THE "Sparrows," an Australian unit, were driven into the hills when the Japanese attacked Timor. After months of fighting, the Sparrows suffered from many shortages, but their most embarrassing lack, for a time, was paper. They resorted to cigaret papers, bamboo bark, and banana leaves. Then one day the Japanese showered their bivouac with printed broadsides demanding surrender. The Sparrows were grateful.—*Signal Corps Information Letter.*

Hip Firing Opposed*

By Major Walter R. Walsh, USMCR

DURING recent months we have read much about a new hip-level quick-firing technique being developed by the Marine Corps and the Army.*

This technique is not new nor was it developed in the Marine Corps or the Army—but has been well-known to experienced shooters for many years. Its limited effectiveness, from the military standpoint, was proven long ago and therefore it has never become generally used.

This hip-level technique is said to be effective up to 30 yards in daylight or dark, and moderate physical coordination is said to make a man comparatively effective and it is said to make standard range doctrine in close range combat practically suicidal. The articles contain many glittering generalities and no comparison of speed or hits obtained is made.

With the present great influx of men into the armed forces who are unfamiliar with weapons and firing technique, it is regrettable that such a poor firing technique is credited with such high efficiency—a credence which is the natural outgrowth of a naive belief in the prowess of our movie gunmen and a too literal credence in some legends concerning our old-time western gun fighters, many of whose feats are even today mechanically impossible.

Looking forward to combat duty and not being disposed to commit suicide, we spent several hours and some ammunition in further practice of the hip-level technique, despite having practiced it on and off for about 10 years, and in confirming again what was already known to experienced shooters and instructors, namely, that best results are obtained by using our present methods.

Speed in firing has always been an essential factor in combat and presumably this was a well-known fact until one of the recent articles introduced it as a new factor, so with this in mind our check on relative speeds between the new technique and our standard range doctrine was close.

Experienced riflemen, skeet and wing shooters knew that an accurate shot could be fired from the shoulder in much less than 2 seconds, but for the information of some of the less informed we checked it.

In the tests conducted, all firing and timing started with the weapons held in a position of readiness, which positions were determined by questioning veterans of jungle fighting; sometimes the shooter was advancing toward the target and sometimes standing still, firing on signal or the appearance of a concealed target. The shooters included qualified and unqualified riflemen, men who had received considerable training and practice in the hip-level technique, and some who had received only a brief instruction session. Most of the shooting was done with the rifle, but some pistols and carbines were also used. The targets were "E" silhouettes and they were fired upon from 10, 20 and 30 yards.

In the tests 504 shots were fired from the hip-level and 220 hits were scored while 533 shots were fired from the shoulder and 460 hits were scored.

Individuals with training and experience in hip-level firing scored in the neighborhood of 50% while scoring about 90% from the shoulder. Individuals, who had only a brief instruction and practice session in the hip-level technique, scored between 10-20% while at the same time scoring between 70-80% from the shoulder.

Average time ranged from 1 3/5 secs. for a shot at each of 2 targets at 20 or 30 yards to 1 sec. for a shot at each of 2 targets at 10 yards. On combat range firing the targets were raised into position by pulling a wire and dropped immediately, total time of visible movements being less than 2 seconds.

A further test was conducted in which a group of recruits who had fired only 2 days of preliminary practice (about 50 rounds) were pitted against a group of men who had been trained in the hip-level technique. The recruits averaged over 83% hits as contrasted with less than 20% for the hip-level firers. In this test each man fired one shot on exposure of the target. The targets were at an average distance of 20 yards and the average length of exposure was 1 2/5 seconds.

Another test, wherein a group of men using standard methods were pitted against hip-level shooters, resulted in a greater number of hits for the men shooting from the shoulder even though there was no restriction on the number of shots fired by an individual at each exposure of the target.

The results speak for themselves and amply justify the soundness of our present methods. It has been demonstrated that it doesn't take any longer to shoot from the shoulder than from the "hip-level," and results are far better.

At distances at which this firing was conducted, even our most conservative instructors would not advocate any position except offhand. Such freakish positions as are advocated for the hip-level technique immobilize the shooter more than a quick shot from the shoulder would, and they obviously impair his accuracy, therefore, from the standpoints of mobility and accuracy, the technique is inefficient.

The "G. I." methods have been developed over a period of years by men who have the "know-how," and who are or have been experienced shooters and instructors. Their experience was gained on the range and in short-range combat. These men have proven that our present system produces more HITS, and only HITS count, not shots fired in some flashy fashion.

Let us not be misled by inexperienced enthusiasts who think something new has been discovered.

The young Marine who is thoroughly grounded in the fundamentals of marksmanship will be a much more dangerous man and will be carrying much better "life insurance" than the man who relies on a technique which is obviously inefficient.

*See "Hip Level Quick Firing," by Captain Stephen Stavers, USMC, in July MARINE CORPS GAZETTE.

Marine Aviation Generals

Major General Ralph J. Mitchell

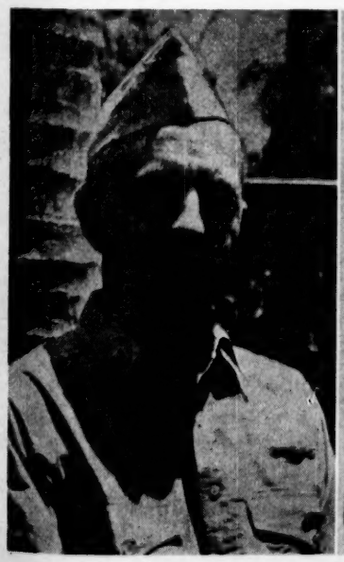
Major General Roy S. Geiger

Major General Ross E. Rowell

Major General Francis P. Mulcahy

Brigadier General Louis E. Woods

Brigadier General James T. Moore



Brigadier General Field Harris

Brigadier General Lewie G. Merritt

Brigadier General Claude A. Larkin

Brigadier General Harold D. Campbell

★★★★★★★★★★★★★★★★★★★★

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COLONEL CLYDE H. METCALF, USMC
Editor

CAPTAIN GARRETT H. GRAHAM, USMCR
Associate Editor for Aviation

FIRST LIEUTENANT CLIFFORD P. MOREHOUSE, USMCR
Assistant Editor

★★★★★★★★★★★★★★★★★★★★

Bases in the Azores

RECENT announcement that Portugal has made available to the United Nations bases in the Azores for anti-submarine patrol will arouse nostalgic memories for many an old-time Marine who saw service in the First World War.

In December, 1917, with the permission of the Portuguese government which was then an active ally in the war against Germany, the United States moved to establish a shore base at Ponta Delgado for ships and planes operating in that part of the Atlantic.

The Marine Corps was assigned the task of defending this base, both with aviation and with some medium caliber guns mounted on shore.

An aviation unit, known as the First Marine Aeronautic Company and commanded by Major F. T. Evans, and an artillery unit commanded by Captain Maurice G. Holmes, arrived there in January, 1918. Having eighteen seaplanes and flying boats in all, the Marines made numerous patrols at sea, continuing this until the close of the war. However, neither the pilots nor ground troops ever made contact with the enemy. One pilot lost his life in an operational accident.

The aviation unit returned to the United States in January, 1919, and was demobilized. The shore battery was withdrawn the following August. Both Evans and Holmes are now Colonels, USMC.

The new bases, now to be made immediately available, are expected to be invaluable to the United Nations in battling the submarine menace, which is expected to rise sharply as the Allies prepare to invade the continent.

The Azores are a group of islands lying 1,643 air miles southwest of London, 1,037 miles west of Lisbon, and 1,495 miles southeast of the big Atlantic air base at Botwood, Newfoundland. In addition to aiding the anti-submarine war, these new air bases in the middle of the Atlantic are expected possibly to enable fighter planes and certainly bombers to fly directly from North America to Africa and later to the continent. They will provide a much more suitable winter air ferry route to Britain.

Marshall's Report

WHEN perusing the biennial report of the Chief of Staff of the United States Army, particularly that part which had to do with the deployment of the army for global war, the editor noted that Marines had also taken part in a world-wide deployment in playing their part in World War II. The report contained a map of the world with dates, indicating the arrival of the first army contingents at various stations. Army units have been stationed on various islands in the Pacific to secure the lines of communication with Australia and New Zealand. In addition to these, the Marines had occupied and reinforced Midway, Palmyra, and Johnson Islands with strong detachments; substantial forces of Marines were rushed in January, 1942, to American Samoa to secure that important position. Not long thereafter, a similar force occupied the principal islands of British Samoa and later pushed on westward and occupied other islands including Funifuti and recently Nanumea. In the Atlantic theater, the date of arrival of army units, as indicated on the world map, in comparison to the date that the Marine units arrived, is interesting to Marines:

Station	*Army*	*Marine*
Iceland	August 6, 1941	July 7, 1941
Newfoundland	January 29, 1941	January 26, 1941
Bermuda	April 20, 1941	March 16, 1941
Bahamas	June 2, 1942	May 28, 1941
Antigua	October 2, 1941	March 17, 1941
Saint Lucia	August 4, 1941	March 22, 1941
Trinidad	May 5, 1941	March 23, 1941
Jamaica	November 21, 1941	March 9, 1941
Cuba	January 20, 1942	Regular station for Marines

The Field Artillery Journal

IN the wide range of service publications which are received in the office of THE MARINE CORPS GAZETTE, the editor had overlooked for several months the *Field Artillery Journal*. A casual perusal of the recent issues of that publication leaves no doubt that it is packed with valuable professional information for all artillery officers and artillery units.

The editors of that journal are diligently seeking out all of the new artillery lessons growing out of the war and are giving the results of their findings to their readers as rapidly as they can make them available. All Marine officers who are connected with artillery in any way will certainly find it worth their time and money to become regular readers of the *Field Artillery Journal*. Membership to the Field Artillery Association is opened to all Marine Corps officers. Annual dues for membership and subscription to the *Field Artillery Journal* are $3.00, obtainable by contacting the Association at 1218 Connecticut Avenue, Washington 6, D. C.

Charles Dodson Barrett

(See Cover Picture)

IN the last issue of the GAZETTE we published a double page of pictures of the General officers of the Marine Corps in command of our principal ground forces. It was known at the time that Major General Barrett had already been put in command of a large field unit. Since the announcement of his assignment had not as yet been authorized, his picture did not appear with those of the other General officers. Instead, we had planned to have his picture on the front cover of the anniversary number and announce his assignment to the command of the largest field force ever commanded by a Marine officer. Now with the deepest regrets, we have to announce his untimely death on October 8, 1943. One of his latest photographs appears on the front cover of this issue.

General Barrett was considered, by all who know him, to be one of the outstanding generals of the Marine Corps, a general upon whom his country could depend to lead its larger field units to victory in their difficult theaters of operation.

He was born August 16, 1885, and entered the Marine Corps as a Second Lieutenant August 11, 1909. He immediately demonstrated the ability and character that marked him as one of the most promising young officers of his time. His entire career and training were shaped to fit him for higher positions of responsibility and to accumulate, by extensive studies at principal schools of war, the necessary broad background and intimate knowledge of military matters to qualify him for higher command.

In addition to the usual experiences of a Marine officer with troops, at posts and stations, at sea and on expeditionary duties, he participated with the Fourth Brigade of Marines in World War I and in its subsequent activities in Europe. He was always a strong exponent of not only obtaining all the higher training offered by military and naval schools, but of passing this on to others. He had several tours of duty as instructor in Marine Corps schools. In addition to completing the courses of study in two Marine Corps schools, he was a graduate of the Ecole Superieure de Guerre at Paris.

He served with the American Battle Monument Commission for three years, and in addition to subordinate commands and important staff assignments at Headquarters, Marine Corps, and elsewhere, he commanded the 5th Marines and more recently the Third Marine Division. He had served as Director of Plans and Policies and as Assistant Commandant of the Marine Corps.

His greatest contribution to military knowledge was in playing a leading part in formulating the doctrines of and developing the technique of amphibious warfare, upon which the United States and its Allies are now basing plans for the ultimate defeat of our enemies. At the time of his death, he was in command of a large amphibious unit.

His passing is an incalculable loss to the Marine Corps and to the nation, but his thoughts will still help guide us to victory. At no time in our history have we been in a position which places such responsibility upon our Generals and Admirals in command of our larger forces. All Marines, who knew General Barrett for many years and who were in the best position to judge his ability, will appreciate the great loss caused by his untimely death.

Salute to Torpedo Eight

IT is with pride and gratification that the Marine Corps extends a felicitous hand to the officers and men of the newly reconstituted Torpedo Squadron Eight of the Fleet Air Arm. According to a recent Navy announcement, Torpedo Eight is once more at sea on a carrier ready for combat with the enemy.

This squadron is the first in the United States Navy to have earned two Presidential citations. The first was for the Battle of Midway, June 4, 1942. Of the 48 officers and men engaged against the enemy that day, only two pilots and one enlisted man survived. The unit was quickly reëstablished and sent to the Solomons to help in the taking and defending of the beachheads seized there.

During fourteen weeks on Guadalcanal, while assigned to the First Marine Aircraft Wing, First Marine Division, Torpedo Eight executed 40 attack missions—17 against ship targets and 23 against ground targets. Fourteen ships were hit by torpedoes—one battleship, five heavy cruisers, four light cruisers, one destroyer, one cargo ship, and two aircraft carriers.

The squadron was included in the Presidential Unit Award given the First Division, Reinforced, for the Solomons' campaign.

The officers and men who served with Torpedo Eight, both at Midway and Guadalcanal, are the only ones in the United States Navy who have the right to wear the Presidential ribbon with two stars.

Marines, who fought alongside this valiant squadron, both at Midway and Guadalcanal, as well as all other members of the Corps, are proud to salute it. The outfit's new members have much to live up to.

* * *

168 Years Young

NOVEMBER 10, 1943, is the 168th anniversary of the Marine Corps; yet never before has it been such a youthful, vigorous organization as it is today. And never before have so many Marines celebrated the birthday of the Corps, nor in so many far-flung posts.

Some will be fighting on November 10th, or engaged in other activities too vital and urgent to permit them to celebrate the day that is so peculiarly our own. But most of us will have time at least to gather together for the reading of the proclamation set forth for the annual consideration of all Marines. Some of us have heard those words many times; others will be hearing them for the first time. But for all of us "it is fitting that we who are Marines should commemorate the birthday of our Corps by calling to mind the glories of its long and illustrious history." That history is studded with the names of great leaders in three centuries —from Burrows and O'Bannon right on through Devereux, Vandegrift, and other fighting Marines of today.

Today's Marines are the worthy successors of "the long line of illustrious men who have served as 'soldiers of the sea' since the founding of the Corps." May it always be so!

Ship-to-Shore Maneuvers

By Sergeant Louis J. Maloof, Marine Corps Combat Correspondent

A SHIP-TO-SHORE MANEUVER, one of the most spectacular in Marine Corps annals, was carried out on a beach near Camp Lejeune, New River, North Carolina, recently when Guadalcanal veterans helped direct a joint landing of Fleet Marines and Navy Medical men. The event highlighted for the first time the duty doctors and corpsmen perform in landing operations, such as took place in the Solomon Islands. It was carried out under the direction of Captain Don S. Knowlton (MC) USN, Commander of the Medical Field Service School at Camp Lejeune, who stated that the maneuver was made "for the express purpose of demonstrating the mission of medical men with Marine units and how they worked in association with other units." Captain Knowlton, who participated in the first landing on the Solomon Islands, was assisted by Lieutenant Colonel Lewis C. Hudson, USMC. Coastguardsmen, under Lieutenant Commander S. F. Hewins, operated the surf landing boats.

A drive was made for three objectives. Dive bombers from Cherry Point, North Carolina, Marine Air Station, opened the operation, strafing the beach and destroying "enemy" installations as the first wave of assault forces advanced in surf-landing boats and effected a landing.

As in actual combat, a "trajectory" of shells from imaginary battleships anchored off shore smashed "enemy" defenses and forces which had assumed positions in the sand dunes beyond. This action was simulated by the use of land and water mines and smoke pots, presenting as realistic a scene as could be staged in practice maneuvers.

Paramarines, diving from a transport plane, landed behind "enemy" lines to further destroy resistance, as the second wave of reserve forces and medical men landed. Litter bearers went into action, attended the "wounded" and evacuated "casualties."

Service troops and the medical company landed with the third wave and within a few minutes doctors and corpsmen established, in the nearest protected area, a medical clearing station, advanced the collecting station and evacuated the battalion aid station's "casualties."

Nothing was left undone to utilize the experience gained at Guadalcanal and to put the men through as true an operation as could be devised by military experts. Ramp boats and tank lighters discharged their cargoes in record time. Riflemen, holding their weapons high above the water, jumped into the surf and advanced for the attack as mortarmen and machine gunners went into action.

Assault forces actually made their way through barbed wire entanglements—blasted in places by dive bombers—and took cover in the sand-dune-shrubbery which closely resembles jungle foliage. Defense forces included riflemen, mortarmen, machine gunners and 75mm. pack-howitzers.

The chain of evacuating "casualties," according to tried plans, was set up from the company aid men, to the battalion aid station, to the clearing station by way of the collecting station. Meantime, the shore party, with a beach medical officer, was functioning, and contact made with the company's clearing station. "Casualties" were dispatched to the "hospital ship" and rear base hospital by R4P's, or ambulance planes.

One scene was an actual transfusion of plasma given by Lieutenant Commander George Donabedian, (MC) USN, who had done this same thing many times in the Solomon Islands. Robert Brown, Pharmacist Mate, Second Class, who received the plasma, was not actually wounded but took the transfusion to add reality to the scene.

"The entire show was technically correct," said Captain Knowlton after its conclusion, adding that "standard operating procedure was followed from start to finish." He stressed the need of this type of training and called attention to figures released by the Office of War Information, indicating that a low mortality rate is being maintained in each battle zone. This is due principally to the rapid, scientific treatment of the wounded.

"Closely approximating combat conditions," Captain Knowlton continued, "the maneuvers also showed that Navy Corpsmen take all the chances their comrades-in-arms do, thus making them an indispensable link in any successful landing on a hostile beach."

Brigadier General H. L. Larsen, commanding Camp Lejeune and recently returned from the South Pacific where he served as the first Military Governor of American Samoa, remarked that "these men will be tough in battle. The maneuvers have brought into play many different branches of the service in a coördinated operation which has shown a high degree of teamwork, so necessary in landing operations. The men all entered into the spirit of the maneuvers with enthusiasm and determination, showing a fine state of training."

Navy doctors and corpsmen who participated in the maneuvers, many of whom will be in combat theaters in the near future, were personnel of the Medical Field Service School at Camp Lejeune.

IT IS BELIEVED that the equipment of the American Army is superior to that of other armies. This is particularly true of American transportation, which has continued to stand up under almost inconceivable conditions.—*Lieut. Gen. Omar N. Bradley, Second Army commander in Tunisia.*

THE AIR FUTURE

Burnet Hershey, Noted Writer, Speaks His Mind

THE spate of books about aviation—the part it should be playing in the conduct of the war, and that it is destined to play in reshaping the postwar world—is threatening to reach astronomical proportions. These range from hastily prepared pamphlets by those who know little or nothing of the subject, to weighty tomes of a highly technical nature; from crackpot theories to profound political and economic thinking.

Occasionally one comes along that combines exhaustive research, intelligent evaluation of past events, and a vivid imagination of the future. Such a book is Burnet Hershey's *The Air Future—A Primer of Aeropolitics*, recently published by Duell, Sloan and Pearce ($2.75).

Mr. Hershey has had some twenty-five years experience as a foreign correspondent, radio commentator and news analyst, and an interpreter of world events. Recently he has had first-hand contact with front-rank statesmen, military leaders, soldiers, sailors, and flyers on the field of action. He has conducted a personal inquiry into the plans of the United Nations for postwar settlements and reconstruction.

It is naturally not within the province of any service publication to take sides in a political controversy, nor to endorse or condemn this or that proposal for future diplomatic policy.

But in view of Mr. Hershey's qualifications and experience as an observer and reporter, some of his views should be of great current interest to readers of THE MARINE CORPS GAZETTE. Whether or not one agrees with his conclusions, it cannot be overlooked that he writes with great force and clarity.

He has given THE GAZETTE permission to quote from *The Air Future* at much greater length than is ordinarily customary in book reviews.

The author traces the history of aeronautics, and the growth of commercial aviation throughout the world. He discusses the technical development of aircraft and the coming era in which some predict that there will be a helicopter in every garage.

But it is in the future use of aviation for world peace, and the maintenance of a system of world-wide air bases to put down any incipient aggression that he becomes most vehement.

Some of his more pungent paragraphs follow:

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"The important thing to remember about aviation is its universal character. It can be destructively annihilating or almost superhumanly beneficient; but it can never be subjected to localized restriction. To aviation, political boundaries are obsolete absurdities."

Page 6

"Numbers of Americans are fighting barber-shop and barroom battles about the advisability of keeping Lend-Lease bases in the West Indies after the war is ended. As anyone who has crossed the oceans in aircraft knows, the mere possession of those bases as a means of defense against concentrated air attack, would be as futile as the heroic charge of the Polish lancers against the Nazi tanks. There is no such thing as 'defense' in an air world, other than the constant ability to smash the enemy before he leaves his own home base, with less than 24 hours' warning."

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"A peace treaty, which does not include, as its chief article, a general system for recognition and mutual employment of air transport will ignore the most potent force for peace which has yet been given to the world. Food, payrolls, shoes, clothing, the daily round of existence in Keokuk, Iowa, Valdivia, Chile, Aden on the Red Sea, and Irkutsk in Siberia will equally depend upon the decisions, actions, or failures of government to fit aviation properly into general economic and political agreements. That is true whether individuals or governments choose to believe it or not. Aviation is too great a power to be subjected to traditional and petty limits.

"Political control of aviation will inevitably lead to a war for 'freedom' of the air. Air control of politics will almost as certainly bring on another war for supremacy of one nation in the air."

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"To civil aviation, a parent of military airpower which has cast so sinister a shadow across the earth's surface, will be bequeathed a rich heritage of precious experience and new techniques, to say nothing of the staggering material accumulation of the military establishments. All this, together with the know-how built up by millions of airmen, will be passed on to the flyers, the technicians, and directors of peacetime commercial airlines."

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" 'All our development is a window upon the future'—these are the words of Colonel Harold Harris, Chief of the Plans Division of the U. S. Army Air Corps Transport Command. . . .

"Future Americans and aviation historians of this war will look back on this branch of the fighting forces as one of the really critical factors in the shaping of victory. Here, in the spirit and intelligence of the men and the industry back of them, was one imponderable which Hitler and the Axis planners failed to consider in his master blueprint. . . . It was no part of the Axis plan to deal with a swarm of great American transport planes and a vast army of capable, tough young flyers hellbent on getting their cargoes to the battle lines. In their wildest dreams the Axis men never foresaw that we would be able to put into the air a delivery service covering the earth, and operating on round-

the-clock schedules with the regularity of trips between New York and Washington."

DISCUSSING the question of sovereignty, Mr. Hershey writes (page 143): "In a good many instances, sovereignty over their own skies will be the only undamaged possession left to nations which have been plundered by the Axis, and a brisk trade in air concessions will be made to yield every possible advantage to bankrupt treasuries and ravaged industries. That in itself can hardly do much harm to the general progress of aviation. But there is the much more serious danger that aviation will again become a political tool with which selfish groups, through international cartels, can unseat governments and generally play hob with the economic and political life of nations. The full extent to which this pernicious practice had gone in France before 1939 will probably never be disclosed. But even superficial research turns up plenty of evidence of collusion between French aviation executives, who had several fingers in the French political ragout, and German Luft experts who were interested in preventing the manufacture of efficient equipment for French military air forces. . . . But France is not unique in this respect, and every possible precaution should be taken to forestall the use of aviation for this purpose anywhere."

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"Over-enthusiastic attempts by a European air carrier to grab at South America might earn its country chilly refusal for any application to fly across or land anywhere in the United States territory. Used judiciously, this policy can act as a preventive of monopoly, and also as an encouragement to high operational standards. Of course, if it is abused by the United States, or any other country situated to exercise it, it can become the most dangerous sort of political and financial monopoly leading directly to the Third World War for domination of the air. As now constituted, the U. S. Civil Aeronautics Board is about as far removed from political pressure as it is possible for any governmental agency to be. Every effort of politicians to change this for their personal or party profit should be resisted by citizens who do not want to go through another war."

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"Aviation cannot be considered simply as a useful new means of transportation, nor as the most terrible new weapon yet developed. It is both, but it is far greater than either or any combination of them. It is a whole new way of life for the human race."

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"The hardest job Americans will have in this period (the next generation after the war) will be constantly to remember that Germany's chief purpose from now on, for many, many years to come, will be for the destruction and humbling of the United States. For over two hundred years—longer than the United States has been in existence—Germans have been taught that they were the master race which would one day rule the world. Twice, when that rule has been almost within their grasp, the United States has interfered to rob them of what they consider their God-given right. It is not the German nature either to forgive, or to forget. Even possession of the incalculable wealth and industrial potential of Russia, China, and India (would) not drive this obsession from the German mind. It (would) only give the power to make their hate effective, first by wrecking our financial and industrial prosperity, and then when we are weakened, dissatisfied, rebellious, by actual occupation of our country.

"The whole process might take half, or a full century. But given the start it is not likely to take nearly so long."

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"The facts of American life from now on will center on remembering that Europe is less than five hours away to the east, Asia less than ten hours to the north. Advance warning of the next war will give us not more than ten hours to prepare to meet attack.

It has been demonstrated beyond argument that no nation can defend itself once a concerted air invasion gets across its borders unopposed. That means, if any nation is to live in other than a constant state of armed alert, a world-wide system of alarm posts must be set up to detect and intercept any threat of assault as soon as an aggressor takes the air. The system must be world-wide because the strength of air bases depends on the ability to converge from all sides on an aggressor nation, as the final air assault on Germany and Japan will prove. Attempts to defend an isolated nation by airpower based entirely on its own soil will be tragic makeshifts, unless a nation devotes a preposterous percentage of its wealth and its productive capacity to air armament and to training its citizenry for air combat.

"A close-knit girdle of land bases for police aircraft must be the symbol and the safeguard for an orderly world in the air age. These bases, like so many scattered Switzerlands, must be useful to a world at peace, while at all times they are alert for war. Their peaceful function would combine many of the familiar features of roadside filling stations, tourist camps, machine repair shops, and local hospitals. But their primary duty, which must be paramount, would be to operate as aerial police stations, responsible for regular patrols of their respective areas, and ready with air riot-squads to quell any disturbance of the peace.

"There will be no peace unless such bases are established as the orderly foundation of international law enforcement. That is a categorical fact, which has not yet been recognized by many of the highest and most responsible officials of the various governments. In discussions about the reconstruction of the world for peace, sea commerce and water transport still are looked upon as the basic bulk-hauling mediums, and railroads are still considered as the chief carriers of heavy burdens overland. To some extent this is true, but it is overemphasized by present military difficulties due to previous blindness in the very matter of establishing and maintaining adequate air bases.

"As one authority puts the case for air: 'Free civilization is in danger of being lost by grounded minds inured to a movement resembling that of the ancient serpent, belly down on land or water.' "

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"In any future war, the lesson which Hitler did not learn in time over England will not be muffed by later would-be conquerors. Unless met by eternal vigilance the next great aggressor will accompany his air attack with paratroops

and use the paralysis of attack without warning to consolidate his victory. Nearly every qualified military observer agrees that that is the lesson of the Luftwaffe-lost battle for Britain.

"Only one thing can prevent such future surprise and that is to have bases so far advanced from landing points in the Americas that they can intercept attack and at the same time launch reprisals at the home cities of the attacker. In other words, bases must be offensive as well as defensive, or they will fail in their primary purpose which is to deal with an aggressor nation in the same blunt way that an old-fashioned sheriff's posse dealt with gangs of cattle thieves. Hardly any nation would be insane enough to start a war if it knew that within hours after its air fleets secretly took off, three or four of its largest cities would be devastated.

"The physical design for such a plan is not particularly complex; and there is no more secret about it than there is in any global map. . . . The essential problem about bases is not their precise geographical location, which can be categorically worked out by any military cartographer on any world globe, or even by any private citizen who has a globe and a gazetteer slightly more detailed than the *World Almanac*. The real dilemma about bases cannot be so easily resolved. It requires a deep-rooted conviction on the part of all peaceful peoples that war is an international crime and their determination that such criminals shall be punished. Without that determination, and the perseverance to demand adequate treaties, prescribing adequate punishment for those who break the treaties, and international military police to enforce the punishment—all the bases in the universe will be just so much more useless geography for school children to forget. That is not a prophecy directed toward some distant future but a lesson of fact taught by the immediate past."

THE author describes how Japan in 1919 took over the Marshall and the Caroline Islands, in trust from the League of Nations, giving a solemn promise not to use them for any naval or military purpose. He writes (page 179): "No one at the Versailles conference bothered about Japan's reason for wanting these unproductive rocks. That was deliberate blindness. The reason was plain and had been published in every detail nearly ten years before.

"In 1909 and 1911, before the First World War and before military aircraft, Homer Lea wrote two books about Japan, warning the United States that one day Pearl Harbor and the Philippines would be attacked without warning, and would most certainly go down under a Japanese assault. The books sold badly in America, but pirated copies sold hundreds of thousands in Japan. The books have been required reading for officer candidates of the Imperial Japanese Army and Navy since 1915. . . . By and large, over a period of fifty years, the policy of the United States government toward the ever-growing seriousness of Pacific and oriental problems has been, in the words of an eccentric pioneer Congressman, to 'pretend it ain't.'

"The perfect example of this deliberate refusal of fact was the reaction of a certain Senator to the first news of Japanese attack in 1941. The Senator, who has built his political career on a policy of leaving the United States disarmed, flatly refused to believe what had actually happened. He had kept his eyes closed to fact so long that he was incapable of opening them. Others, in and out of Congress, were just as deliberately sightless.

"This may seem beside the point that it is imperative to establish bases to keep an air-world at peace, but it is the very heart of the subject. One of the oldest military truisms, resulting from realistic study of the long history of war, is that no fort is stronger than the spirit of its garrison. And the spirit of any garrison is a subtle combination of confidence in the intelligent foresight of its leaders and assurance that adequate munitions are on hand. Congress refused to provide adequate munitions and turned a disinterested ear to the alarms of our sentries on the Pacific frontier. On both counts, provisioning and foresight, Congress did not instill the necessary spirit to maintain our garrison. The excuse that this was for reasons of economy is specious. While the actual money cost of this neglect may be incalculable, it can be roughly estimated to equal whatever total national debt the United Nations will present their various countries at the close of the war. The cost in blood will be the total of our United Nations dead in the Pacific. The post-war cost of establishing bases, if that had been done immediately following the Armistice of 1918, would have saved the whole cost of the second war."

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"The failure of bases in the Pacific is demonstrably a just indictment of the policy, or irresponsible lack of policy, of the United States. No other country had so much at stake; no other country was so criminally negligent. This fact is the real cause for most of the doubt and suspicion with which our Allies continue to regard us. . . .

"There are, and will be, attempts to put all the blame for this condition on the Army or Navy brass-hats, or on Congress, or on some other scapegoat group. The truth is that no one group, and no one section, can be exclusively blamed for our destructive policy. The guilt is shared by all the people of the United States. Over a four-year period, Congress pretty accurately interprets the desires of the electorate; and the armed forces can do only what Congress authorizes to be done. Naturally most people vote for the candidate who will give jobs, or send free seeds, or who best flatters the local vanity or promises the largest increase in local trade balances. That, being human nature, can hardly be changed. But it can be enlarged to include as a requirement for success at the polls that the candidate be equally zealous in protecting the whole of the United States as he is in promoting the interest of his own community."

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"If it were simply a question of our own survival, we might justify a self-deluded dream of isolation by risking the inevitable destruction which would overwhelm us. But such national suicide would also bring death to the hope of individual freedom throughout the world. Those nations sharing our beliefs in human dignity and justice . . . could not hold the fabric of freedom together without the cement of our continued faith, and the material weapons—including air weapons—we can produce with which to resist tyranny. This responsibility, though not entirely ours alone, is ours in greatest measure. We have the free choice of honorably

discharging it, or ignobly evading it, but in either case whatever the result, it will have been of our own making."

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"Responsible officers of the United States and friendly countries tried to call attention to these activities (*Japan's obvious plans for a war against us*) but their pointing to the facts was hampered by emotional outbursts from irresponsible journalists and legislators. Statistics as to naval and air power were twisted. . . . A layman's natural inference from these distorted figures was that the United States already possessed a Navy greatly superior to anything the Japanese had or could produce in their limited shipyards. Every Navy request for appropriations—either for surface ships or aircraft—was met by a chorus of fanatics shouting that the Navy must be planning for a war with Britain, since we already had strength enough to beat the Japs any day between dawn and dusk."

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"Even as late as April, 1940, within two years of Pearl Harbor, Rear Admiral Taussig, who had served three years as Assistant Chief of Naval Operations, was indirectly rebuked by both the State and Navy Departments for telling the U. S. Senate Committee on Naval Affairs the truth about our Pacific frontier and the imminence of war unless America awakened. Admiral Taussig had a very distinguished professional record. . . . He knew what he was talking about. . . . He outlined the Japanese program in some detail—it was not secret, the Japs were advertising it themselves with pamphlets and publications in every language from Tokyo English to the most obscure Malayan dialect. . . .

" 'This is a very grandiose plan,' the Admiral commented, 'and much may happen to interfere with its accomplishment. The fact remains, however, that it *is* a plan, which is underway in the hands of a determined, warlike people armed with modern weapons, with little or no effective opposition. Past treaties, rights of neutrals, rules of civilized warfare—as we understand them—are pushed aside and ignored in the furtherance of the plan.' (*This was in April, 1940; the direct quotation is from the Congressional Record.*)

"The following day a member of Congress rose in the House to denounce Admiral Taussig as 'a naval propagandist.' He declared that the Admiral's statements set up a 'hobgoblin,' and merely 'added fuel to the flames of war hysteria.' And then the Representative capped his harangue by violent protests against any suggestion that the Far Eastern possessions of the United States be fortified, or strengthened. We all now know that Admiral Taussig's statements were true. We know they were ignored. We know that the Philippines, Guam, Wake, were not strengthened. We know they fell. We also know why they fell. This Representative, reëlected to Congress after they fell, was one of the reasons."

MR. HERSHEY discusses our failure to realize the importance of air bases in the Orient in 1940 and 1941. He tells how only a few months after the fall of France, General Catroux, then Governor General of French Indo-China, sent a mission by air to Washington begging for moral support against the combined assault of Vichy collaboration and Japanese enchroachments. If, in addition, General Catroux argued, Washington would send some token military force by air, Indo-China—and with it all southeast Asia—might be held. General Catroux's own words to an American reporter who interviewed him were: "I want to know if you can think of any way in which I can show your country, before it is too late, the damage if Japan gets into Indo-China. . . . I don't think it is realized that action here, *now*, is the last chance to stop the Japanese from getting a real foothold throughout the South Pacific, and that the whole Allied cause would be bitterly involved in the consequences if the Japanese are not stopped. Why, the importance of the raw materials alone—."

(*These were huge quantities of tin, rubber, hemp, and other essential things of which America is now critically short and which General Catroux was trying to get the United States to buy before they were seized by the Japanese.*)

Mr. Hershey continues: "No reply to his mission ever reached General Catroux before he had to relinquish his command to his Vichyite successor, who immediately turned Indo-China over to the Japanese along with its supplies and air bases. Indo-China was the gateway through which the Japanese reached Thailand, the Malay Peninsula and Singapore. It was the principal stepping stone toward the Philippines. In short, it was one of the vital Allied bases in the Far East, offered to us to help restore the peace and give protection to our own and other non-offending citizens.

"Hundreds of thousands of Chinese, scores of thousands of Americans will probably die before this peace can be regained. Less than 1,000 men of any air force could have held it as one unit in an air network stretching from the Yellow Sea to the Java Sea. However, the people of the United States were shouting for neutrality, and obediently their government gave them what they thought they wanted."

(*Mr. Hershey relates the failure of this country to send to China and the Netherlands East Indies vitally needed planes and other supplies which had been contracted for and in some instances paid for.*)

"China is the greatest air base in the Far East particularly for subduing and subsequently patrolling the coastal waters now controlled by Japan. . . . In due course China will undoubtedly receive many times the number of bombers originally expected, and for which China has already paid in essential war materials which are unobtainable in the Western Hemisphere. But between the due-date and the delivery many men, Chinese and American, will have been killed, some needlessly. The purpose of air bases is to save men from needless dying. . . .

"Of course, America had sent quite a little war material into the Pacific. Some of the Marines on Wake Island made interesting collections of goods from home delivered in shrapnel form by Japanese planes. Their remarks on finding familiar and unmistakable radiator caps and other articles are reported to have been strictly in unprintable four-letter words all directed toward those fellow-Americans who

sold, and those who permitted selling, scrap material to a probable enemy."

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"Wake Island lies all alone in a thousand-mile expanse of vacant ocean except toward the south where, less than 500 miles away, the Japanese were busy violating their treaties by building airfields and storing munitions in the Marshall Islands. In spite of numerous Pan-American requests and Navy warnings, as late as November 15, 1941, there was not a single American military aircraft on Wake Island, due to our official determination not to irritate the Japs. The Washington situation was precisely that of a municipal council which refused to let its police force leave barracks for fear of irritating local gangsters."

THAT the same type of wilful neglect is present today is charged by the author, who writes (page 196): "There is already a tendency, led by the still uncontrite Congressmen responsible, to dismiss the neglect of Wake and Guam as so much ancient water over an abandoned dam. American Marines, who defended those islands hopelessly to the last milligram of strength, have quite an opposite view. So, perhaps, has the majority of Americans. But whatever the opinion, there remains the fact that isolated Wake and Guam told the lesson, not a secret, of how unsupported bases will be lost. . . .

"The United States was not alone in its smug blindness over the Pacific. Almost the same situation prevailed at the British bases of Hong Kong and Singapore. . . . But in both instances, the real failure was neglect to observe what the enemy was doing. That sort of air reconnaissance was forbidden by treaty, so we sanctimoniously refrained, although the enemy was known to be breaking the treaty almost daily. They knew exactly what we were up to, which was very little, but we were too proud to find out what disaster they were planning for us. In a phrase it was a case, on our part, of too much cricket and not any common sense."

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"With the world geared to such new speeds, air bases are responsibilities which cannot be ignored, nor played with for partisan political or financial advantage, or personal prejudice and caprice. To do that is to connive cynically in the murder of soldiers and sailors who have been ordered to hold a post which their civilian superiors have willfully written off. If that policy is to be repeated there will be no orderly world, and the air age will come under control of whatever future aggressor first launches a surprise raid over the United States."

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"In 1927, after passage of the Japanese Exclusion Act, Admiral Tojo, then commanding the Japanese fleet, told a muster of his warship captains: 'From this moment we are at war with the United States, but they will only find it out when we are ready.'

"Blithely unconcerned, we ignored the threat, and only warned the United States Navy not to disturb or spy on whatever the little Japs were doing in the mandated Pacific Islands. Continuance of that policy, year after year, made eventual attack by the Japanese psychologically inevitable. Our contempt increased their hatred and determination to hurt us mortally and, one day, to wipe us out. Our neglect of our own defenses and our failure to interfere with their offensive preparations earned us the return of our contempt. No matter what the exact outcome of the war, we must prepare for continued hatred from the Japanese for many years to come. We do not have to return their hatred, but we will have to compel their respect, and the only way in which that can be done after the first shock of defeat has lessened will be unrelaxed supervision of all the Islands in the Pacific on which Japanese are resident."

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"Under the Mahan principle of security being obtained only with possession of the farther ocean shore, which was the underlying military principle of the Iceland expedition, a landing or other display of force—anywhere in Asia would have been constitutionally defensible. It might have been ordered by the President. It could have been directed by Congress. It should have been demanded by the American people. The responsibility lies no further than the nearest voting booth. Every American voter has a say in whether we will maintain air bases for a world of peace."

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"There is (no) valid argument against the fact that some air bases, distributed somewhere about the world and somehow empowered by all nations to enforce a general rule of peace upon all, are the best hope yet for all of the millions who really want a world of peace.

"Finding a plan is not the great difficulty. The police organization of any great city will provide an adequate chart from which to draw the design of this larger police force. There is no material barrier which cannot be surmounted to reach an efficient plan of air patrol for peace. The difficulty will lie in finding representatives who have an honest will for peace, and who can put aside both vanity and prejudice, and dare to risk their own political careers. The men who signed the American Declaration of Independence literally risked their own lives, the future of their families, and the possible contempt of history. Only men whose courage equals theirs are strong enough to push aside the greeds and jealousies which will inevitably fasten on this project, and try to turn it or to oppose it for some partisan advantage."

SOMETHING must be left to chance. Our only consideration should be, is the honor and benefit to our country and its allies worth the risk? If so, in God's name, let us get to work.—*Lord Nelson.*

WAR IS LIKE THIS*

By Warrant Officer E. J. Kahn, Jr.

EARLY in January, 1943, while the War Manpower Commission was still fretting about who should or should not be drafted, Buna fell. A month or so later, the last of the Japanese ground forces who had been in Papua since the previous July were completely routed by Allied infantrymen.

By the standards of large-scale warfare, it was a numerically unimpressive victory. On the Russian front, either side would probably regard as wasted any month that failed to produce more casualties than the total number of fighting men on both sides at Buna. War is not statistics, however. To the individual soldier, a minor patrol skirmish of no great strategical importance can, of course, rank with the greatest battles of history. The battle of Buna was not big, but it was hard and it was dirty. And long after the big Pacific battles to which it was the overture are finished, some Americans who fought in the jungle and the tall kunai grass and the coconut groves of Papua will still be getting their mail in a hospital.

My part in the Buna campaign was a relatively inactive one. I didn't kill General MacArthur the Jap he had asked each of us to bag for him. I never even had the chance. My job was in headquarters several miles behind the front-line positions, where I tossed around a lot of urgent and tactically significant message slips but no live ammunition. The areas I was in were generally so safe that my pals and I could still frivolously complain about mosquitoes when the boys up forward had long ceased to show concern over any flying object less irritating than a machine-gun bullet.

A front-line soldier is rarely able to form any overall impressions of the action he is up to his neck in. In that respect I was lucky—I had a pretty good idea of what was going on before the fighting began and while it was underway. The Japs had marched across the Owen Stanleys and had withdrawn after getting to within some thirty miles of Moresby. Australian troops followed them back over the hills, and at the same time Americans, most of whom had been flown across the mountains east of the Japanese lines, closed in from the flank. It had been fairly certain all along that the Japs would make their last stand at Buna, their main Papuan base, in peacetime a rather dowdy coastal trading center and mission. Nobody knew exactly how strongly the Japs would be able to defend Buna. Aerial reconnaissance of the place was inconclusive; the skillful camouflage used by the Japs and the natural screen provided by the jungle effectively concealed their installations.

It didn't take long to ascertain, though, that the enemy, expecting a siege, had constructed an elaborate series of fortifications, consisting mainly of earth bunkers reinforced with heavy logs that could withstand a direct hit from practically anything except a bomb. In the bunkers were slits through which machine-guns could cover all likely approaches. Some of these bunkers held out until Australian infantrymen closed in on them behind medium tanks. Others were knocked out entirely by soldiers—Australian and American—who sidled up to them and tossed hand grenades through the vents, or managed to poke the nose of a tommy gun or automatic rifle inside and give the interior a thorough raking.

Some Americans, to get up close to bunkers, slogged through neck-deep swamps, holding their weapons over their heads. When our troops finally entered some of the bunkers, with fixed bayonets and much caution, they found an unexpectedly large number of corpses, or thought they did. You can't ever be certain that a Jap who looks dead is. Judging by their ability to impersonate corpses, I'd say that Japs have more than their share of dramatic talent.

Although Japanese exploits with knives have been well publicized, the New Guinea campaign, as far as I heard, did not disclose any great proficiency on their part in this line, beyond committing hara-kiri, at which they had already been known to be adept. They bayoneted one ambushed American, unbound, half a dozen times without killing him. Out on a patrol, he was trapped by two of them. After felling him with one thrust, they bayoneted him five additional times and then sat down on what they presumed to be his remains and began to eat their lunch. The American, an incredibly durable soldier, regained consciousness an hour or so later, and was startled to find two Japs on top of him, munching unconcernedly. Despite his wounds, he managed to remain motionless until they had swallowed their last grain of rice and sauntered away. Then he gulped down a handful of sulfa tablets, crawled back to his company, and reported in.

Many of our men fought for days without seeing anything they could definitely identify as a Japanese. Enemy snipers would conceal themselves so craftily in trees that, after the branches had been riddled by machine-gun or automatic-rifle fire, our soldiers still couldn't be sure whether or not there had been anyone up there unless a body dropped down or, if the sniper had tied himself to his post, dangled limply from a branch. A good deal of the warfare was of a blind, tentative nature, much of it fought from foxholes half filled with water, in which grimy troops sometimes crouched for several days.

Sometimes the men had individual canned rations with them; sometimes a squad would get hold of a large tin of bully beef and pass it around. One man would open it up, eat his fill, put the lid back on, take careful aim, and fling it into the next foxhole. This procedure would be repeated as long as there were hungry men within range. This unorthodox and relatively simple method of feeding required so little effort on the part of mess sergeants that occasionally, being unable to perform their primary duties in their accustomed manner, they would take it upon themselves to perform odd little jobs. One day a mess sergeant and a cook, both dispirited by their idleness, ventured up a trail, got in behind a Japanese machine-gun emplacement, and tidied it

*Reprinted from *Infantry Journal*, September, 1943.

up just as if it had been a kitchen, except that they had no KP's to help them.

THE Japs were full of tricks, and some men fell for them —once. One American unit, crawling through the jungle, heard noises to their front, where they suspected the enemy was, and got ready to fight. "Hold your fire. We're the Aussies," a voice called out in a plausible accent. An American uttered a cordial and imprudent reply, and a moment later the Japs started shooting in the direction of his greeting. Many of the Japanese knew some English, and some who were not well-rounded linguists appeared to have been schooled in such phrases as "Give me a hand, Bud, I'm wounded," or "Got a cigarette?" Any American who heeded these pleas stood an excellent chance of being picked off.

In jungle warfare you never know what is going to happen next, and the tension that constantly prevailed in Papua affected not only the troops up front, but those behind them too. While my outfit was camping on the edge of the ocean, we continually imagined dangers lurking at sea. We knew, for instance, that the Japs had some submarines around, by which they had once or twice slipped in supplies at night. We wouldn't have been at all surprised if they had tried to use them to slip in reinforcements, and we frequently dwelt upon how embarrassing it might be for us if our little detachment found itself unexpectedly confronted with the task of resisting a battalion or so as it tried to make a midnight landing. From time to time mysterious flares would light up the night, dropped, presumably, by unknown planes that we could hear but not see. Other lights would flash out at sea, and we would debate whether they were evidence of a naval engagement or merely heat lightning.

Some men really got jumpy. One night, when I happened to be handling a field telephone, a frantic operator at an airfield a few miles away shouted excitedly that the place was being invaded, and then lapsed into dismaying silence, leaving me with the impression that he might well have been throttled. Since that particular airfield not only was some distance from where we had previously known the Japs to be, but also was a crucial supply base, his information was alarming. Hurried orders were issued by our officers; companies were told to prepare to move out at top speed; wire crews were dispatched to check the phones; warnings were rushed to all units. Less than an hour later the report was officially branded a false alarm started by a jittery sentinel, and the incident was quickly forgotten as we all went back to pondering such matters as who had won the naval engagement—unless, of course, it was only heat lightning.

The next day there were some further taut moments when a couple of soldiers ran into our headquarters with the astonishing revelation that they had been fired upon by a Japanese patrol far from where the enemy was supposed to be. They had been walking down a trail some six miles away, they said, carrying their shoes in their hands after fording a stream, when they were attacked. Dropping their shoes, they had wriggled along on their bellies to the stream, recrossed it, and raced all the way back barefoot. We were perturbed, because two fairly high-ranking officers were somewhere on that very trail, coming our way, and scarcely equipped to withstand any determined assault. An hour and a half later they turned up, traveling at a normal pace and wearing shoes. It developed that they had fired a few highly misinterpreted shots at some enticing coconuts high up on a palm tree.

These instances of temporary instability were, however, exceptions. On many more occasions soldiers in awkward spots displayed admirable coolness. One sergeant who had been delayed while on a solitary mission in an unfamiliar stretch of jungle was overtaken by darkness when he still had four miles to go. He was on a typical trail, full of twists, drops, mud-holes, and protruding roots, and to navigate it at night without a flashlight would have been inconceivable. Faced with the unpleasant choice of spending the night where he was without a mosquito netting or floundering about and probably losing the trail altogether, he thought the situation over, then calmly groped around until he caught hold of a wire that was strung at the edge of the trail. He got home by feeling his way along the wire, having realized that a telephone line could be the shortest and safest distance between two points.

The men at the front in New Guinea were gaunt and thin, with deep black circles under their sunken eyes. They were covered with tropical sores and their jackets and pants soon became tattered and stained. Few of them wore socks or underwear. Often the soles had been sucked off their shoes by the tenacious, stinking mud. Many of them fought for days with fevers and didn't know it. During one comparative lull, an inquisitive medical officer with a thermometer inspected some hundred men, and everybody involved was surprised to find that sixty of them were running temperatures of from two to three degrees above normal. Malaria, dengue fever, dysentery, and, in a few cases, typhus hit man after man.

THERE was hardly a soldier, among the thousands who went into the jungle, who didn't come down with some kind of fever at least once. Officers and men were equally and unavoidably bedraggled. They ran similar fevers, ate the same dreary rations, and wore the same shredded garments, without any insignia of rank. The use of military titles was discouraged, and, within the hearing of enemy snipers, whose favorite targets were those with authority, an officer would look downright hurt if any subordinate had the tactlessness to address him, in a carrying voice, as "Sir."

Even our most dilapidated colonel, however, looked pretty sharp compared to the average Japanese. Most of the Japs we faced had had more jungle experience than any of us, but the fact that they could perhaps identify more tropical plants than we could had not rendered them less immune to the malaria-spreading Anopheles mosquito, which never makes friends, or to hunger, which was more manifest in their rank than ours, despite the popular theory that a Japanese can exist practically forever on a penny's worth of rice and a handful of honorable fishheads.

The termination of the existence of a lot of Japanese around Buna was expedited by the ability of Americans to become tough to a degree that would undoubtedly have shocked any sensitive parents who saw them in action. There were numerous cases of soldiers who withstood incredible

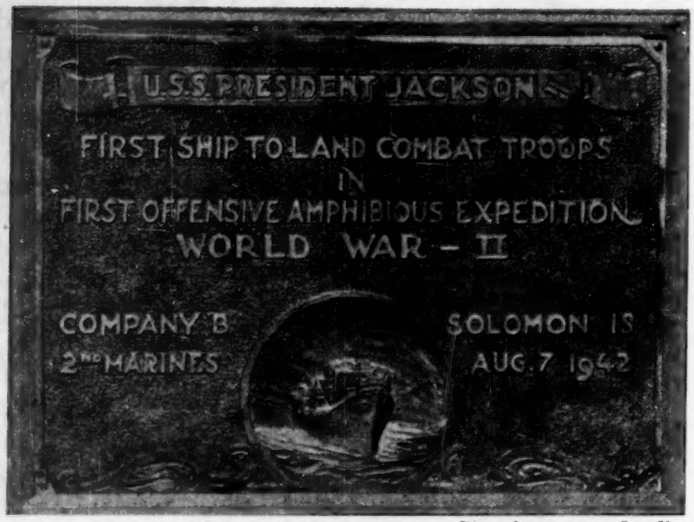

Photo by courtesy *Our Navy*.

PLAQUE COMMEMORATES LANDING

This plaque, presented to the U.S.S. *President Jackson*, commemorates the landing on August 7, 1942, of Co. B, Second Marines, in the Solomons Islands for the first amphibious expedition of World War II.

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suffering in the common cause of killing as many of the enemy as possible and getting the damn war over with. There was the private first class who, painfully wounded in the groin one night, lay in a watery foxhole for thirteen hours with maggots crawling over him, stubbornly refusing to cry out for help because he knew the slightest sound might give away his company's location.

There was the private who, because of a shortage of medical orderlies, didn't bother to tell anybody when he was shot in the foot. He limped back to a field hospital carrying a bullet he had extracted from his legging, after it had gone through his shoe, not to mention his heel and ankle. He had walked to the hospital, several miles away, all by himself, and when a dazed doctor, investigating this miracle, asked if it hadn't hurt, he said no, not too much except when he stopped to rest. "So I kept going," he added.

There was the lieutenant who lay, desperately wounded but conscious, within conversational range of his platoon for days, and who kept a diary until he died. Three men had tried to get to him, but when one was killed and the other two were wounded in the attempt, he asked a captain to forbid anyone else to come out and the captain reluctantly agreed because he couldn't spare the men.

The jungle was tough and the Japs were tougher, but the Yanks were the toughest of all. I stopped in at a hospital to talk to one of them, lying wounded on a bed far from the front, eating the first decent food he'd had for weeks, and able at last to get a bath and a cold drink, whenever he wanted. "Well, you're pretty lucky," I said, "to be out of all that. You'll have a fine rest now."

"To hell with the rest," said the soldier. "My brother was killed up there."

Performance Figures on Grumman Hellcat

THE newest fighter plane of the Navy and Marine Corps, the Grumman Hellcat, in its short combat career already has established itself as one of the world's most effective military aircraft. It is definitely in the 400 mile-an-hour speed class. This speed compares favorably with that of any plane in active service in any air force. It is much faster than the fastest Japanese type now operating against the Hellcat.

Other significant performance figures of the Hellcat, which was designed and built since Pearl Harbor, are:

Range of the big fighter is over 1,500 miles. This makes it, along with the Navy's other new fighter, the Vought Corsair, one of the longest-range fighters in service today.

Service ceiling is over 35,000 feet, the same as that announced for the Corsair.

Still another similarity between the two fighters is the power plant. Both are powered by 2,000 horsepower Pratt and Whitney engines. This power is necessary to carry the increased weight of the Hellcat, which is thousands of pounds heavier than the Grumman Wildcat, the fighter with which the Navy and Marines carried on the air war from Pearl Harbor until advent of the Corsair last Spring.

The Hellcat was first put into action during the raid on Marcus Island on September 1, 1943. The raid caught the Japs so by surprise that no enemy planes got off the ground, and the new fighter's ability in aerial combat went untested. The Hellcats, however, devastated ground installations by strafing.

On October 5, the Hellcat proved itself in the air when, during the raids on Wake Island, 30 enemy planes were reported shot out of the air, all by the new fighter plane. In still another engagement, in the Solomons, 21 enemy planes were destroyed by the Hellcats, against the loss of two of the new fighters.

The Hellcat is a single-engine, single seat, low wing, all metal, folding wing monoplane, designed to operate from carriers or land bases. It has retractable landing gear. Wing span is 42 feet, 10 inches. Over-all length is 33 feet six and one quarter inches. It has a three-blade Hamilton Standard propeller. Details of armament are still restricted.

The plane's long range will permit attacks on the enemy from greater distances or a longer period in the air when engaged in combat. The service ceiling is sufficiently high to assure that no enemy fighters or bombers will "get on top" of the Hellcat.

Combined Operations, 1918*

By Admiral of the Fleet Lord Keyes

TOWARDS the end of September, 1917, much to my disgust, I had been brought down from the Grand Fleet, where I was a Rear Admiral in command of a division of battleships, to be the first Director of Plans at the Admiralty.

At that time our submarine losses were enormous, and the Admiralty considered that it was absolutely essential to capture the submarine base at Bruges.

On 1st January, 1918 I was appointed Acting Vice-Admiral Commanding the Dover Patrol and had under my command some 300 vessels, including large and small monitors, a light cruiser, flotilla leaders, destroyers, P-boats, trawlers, drifters, mine-sweepers, M.L.s, C.M.B.s, and submarines. My command included a number of naval guns, 12 in., 9.2 in., and 7.5 in., manned by marines and seamen, mounted in batteries behind the Belgian lines, also fifteen squadrons of the R.N.A.S., day and night bombers and fighters, based on aerodromes westward of Dunkirk, with a landing ground at Dover, where I kept an aircraft which I used like a motor car to take me all over my command and to visit the Military H.Q.s of Sir Douglas Haig, who told me that he looked upon my command as the left flank of the Allied Army. The Belgian Army rested on the sea and my monitors, siege guns, and aircraft coöperated with them. King Albert and his Queen lived in a little villa amongst the sand dunes at La Panne, which was actually within range of the German guns at Nieuport.

The activities of the Dover Patrol were immense. They included the mine-sweeping of vast areas every morning and the operating of troop carriers and hospital ships across the channel. Many ships were performing routine duties and their crews had become unaccustomed to combat.

Thousands of our soldiers were fighting desperately in other areas, and I was determined that the Army should not be asked again to make sacrifices, in order to relieve the Navy from carrying out an operation, which, cost what it might, would greatly handicap the enemy's submarine campaign, and I felt that a decision must now be fought for in the area confided to my charge.

I had learnt my lesson off Gallipoli, where I had watched a campaign that had infinite possibilities peter out through irresolution; and I was determined to put an end to the peaceful inaction in the Dover Straits for which our shipping farther afield was paying so heavily.

Meanwhile, preparations to deliver a combined operation with all the forces under my command were pressed on. I was anxious to carry out this operation entirely with Naval and Marine personnel, and asked the Admiralty to make up a battalion of marines to act as assault troops, and was given a company 250 strong from each of the three Marine Depots, which assembled at Deal to receive battle training for the task before them.

I asked Sir David Beatty to lend me 300 bluejackets from the Grand Fleet to take part in the operation. These were drawn from every battleship and battle-cruiser, officers being selected by the Admirals of the Squadrons and told to select their own men who were likely to enjoy a hazardous operation. Later Admiral Beatty sent me stokers and E.R.S.s and Royal Marine Artillerymen, thus every branch of H.M. sea service was represented in our enterprise, the main objects of which were to block the Bruges ship-canal at its entrance into the harbour at Zeebrugge; to block the entrance to Ostend Harbour from the sea; and to inflict as much damage as possible upon Zeebrugge and Ostend.

Zeebrugge harbour is connected by a ship-canal with the inland docks at Bruges, which communicates again by means of a system of smaller canals with Ostend harbour. The whole forms a triangle with two sea entrances. The eastern side, which is 8 miles long, is the ship-canal from Zeebrugge to Bruges; the southern side, which is 11 miles long, consists of smaller canals from Bruges to Ostend; the base, facing northwest, is the 12 miles of heavily fortified coast line between Ostend and Zeebrugge. This fortified line was prolonged 8½ miles to the westward, extending to the right flank of the German Army facing Nieuport, and 7 miles to the eastward as far as the Dutch frontier. The defenses included a number of batteries mounting over 225 guns, 136 of which were from 6 in. to 15 in. calibre, the latter ranging up to 42,000 yards (23 miles).

This enormous system of defense provided the base for at least thirty-five torpedo boats and thirty submarines.

When the combined operations of the 22nd-23rd April were undertaken, it was believed that, although the blocking of the Zeebrugge entrance to the Bruges ship-canal was the most important of all objects, it would be necessary also to block the entrance to Ostend harbour.

The entrance to the Bruges canal at Zeebrugge was covered by a massive stone Mole, more than a mile long and 100 yards wide, on which was a railway station, the terminus of a line which linked the sea port of Bruges—Zeebrugge—with the Continental railway system. At that time, the Mole was connected with the shore by a steel viaduct, 300 yards long and 40 feet wide.

A battery of quick-firing 4 in. guns at the end of the Mole would have to be passed, at a range of less than 100 yards, by blockships attempting to reach the canal entrance; it was important therefore to try and capture this battery before the blockships arrived.

It was important also, that while the Assaulting Force was engaged on the Mole, no reinforcements should arrive from the shore, and it was hoped to prevent this by running an old submarine, carrying 5 tons of high explosive, into the steel viaduct and blow a breach in it, thus turning the Mole into an island.

To get the ships carrying the Assaulting Force alongside the Mole and the blockships into the canal entrance, in the face of the formidable gunfire they would encounter, it was necessary to provide a smoke-screen to cover their approach;

*From Lord Keyes' *Amphibious Warfare and Combined Operations*, published by the Macmillan Company, New York, in conjunction with the Cambridge University Press.

it was also necessary to carry out the blocking operation at high water and as near midnight as possible, in order to approach and leave the enemy's coast in darkness. If we could hit off this condition on a fine night, with a smooth sea and a light northerly wind, blowing the smoke-screen like a sea fog towards the shore, we hoped it would be possible to get the blockships and assaulting ships quite close to their objective before they were discovered.

If at the same time the enemy's attention could be diverted, by a tremendous bombardment from our heavily armed monitors, and if an air attack, from the splendid Naval Air Service attached to the Dover Patrol, could be delivered on the Mole, a few minutes before the Assaulting Force arrived, in order to drive the garrison of the Mole down inside their bomb-proof shelters, it might be possible to spring a complete surprise on the enemy.

IN order to accustom the enemy to our appearance off the Belgian coast at night, the monitors bombarded and air attacks were made, while C.M.B.s (fast motor torpedo boats) were active off Zeebrugge and Ostend every favorable night.

As the Germans used most effective smoke-screens, under cover of which they manoeuvred to escape at the Battle of Jutland, I called in the aid of Wing Commander Brock of the R.N.A.S. Experimental Station—one of the firework family of Crystal Palace fame. Brock soon produced an excellent smoke by introducing chlor-sulphonic acid into the exhausts of the internal combustion engines of motor launches and C.M.B.s, and the funnels of destroyers.

I had originally hoped to carry out the operation in March, but I found it impossible to get enough smoke for the 130 vessels engaged until the War Cabinet gave orders that the manufacture of Saxine—a substitute for sugar—was to be completely shut down until all the chlor-sulphonic I needed had been delivered at Dover. This was not until early in April.

Brock's contribution to the undertaking was of great value to me, for in addition to fitting out the vessels with smoke-making apparatus, he designed special smoke-making floats, to be anchored in selected positions; he also designed immense flame-throwers for the assaulting ship; parachute flares for aircraft to drop; flare rockets for surface vessels to fire, and special light buoys to mark the route. Brock's one plea—which I would have preferred to refuse, as his genius for inventions was so valuable—was that he should be allowed to take part in the attack. He was particularly interested and anxious to get on to the Mole, in order to find out the German method of sound ranging, so I reluctantly consented to his going with the Assaulting Force.

In the Dardanelles Campaign, Naval Surveying officers had made bombarding charts, erected guiding marks on shore and laid buoys off the coast, which enabled ships to carry out accurately the bombardment of any object or area within their range, at the request of the Army. I obtained the services of these same officers and they made arrangements to lay Brock's light buoys, after dark, for the bombarding ships, and to mark the routes, to ensure correct timing, on which the whole plan of action depended.

I was given six old cruisers, including the *Vindictive*, to act as blockships. I thought the most suitable assault ship would be a fast handy shallow draft vessel with high freeboard, stoutly built to go alongside quays, such as those running between Holyhead and Queenstown. But I was told that nothing of the sort could be spared so I decided to fit out the *Vindictive* for the purpose. Her draft was against her and she could hardly hope to escape hitting a mine, if we ran into a minefield; so I sent an officer round the ports to look for a couple of ferry-boats of the type one had so often seen bumping or ramming their bows up against a quay to nose themselves round in a tideway, and eventually selected two Mersey ferry-boats, the *Iris* and *Daffodil*. They could each carry about 1,000 people, had double hulls and only drew about 11 feet of water. They could thus pass safely over any minefield at high water.

Each blockship was fitted with two control positions well protected with defensive mats to keep out machine-gun and rifle fire. The three foremost guns remained to engage the batteries and defend the ship. Protection was given to machinery, boilers, etc. by concrete blocks. Charges were fitted for blowing out portions of the ships' bottoms with firing keys in each control position. An expert of the Liverpool Salvage Company was consulted and cement blocks and bags of cement were placed in positions to prevent or delay salvage, or the cutting away of a portion of the hull to free a passage. (After the war, the same Salvage Company took more than a year to remove the two blockships.

In order to launch the assault from the *Vindictive* as nearly as possible from the level of the Mole parapet, a stout deck was built on the skid beams—on which the boats normally rested—from the fo'castle to the quarter-deck on the port side, the boat crutches being removed; three wide ramps sloped up from the starboard side of the upper deck to the false deck, to give ready access to it by the Assaulting Force, who would remain under cover as long as possible. Eighteen brows, or gangways, were hinged on the false deck and triced up, ready to be dropped on the parapet of the Mole, which, during the possible hours of attack, would be from 4 to 7 feet higher than the false deck.

In addition to her main armament, the *Vindictive* was provided with a 7.5 howitzer on her fo'castle, another on her false deck, and an 11 in. howitzer on her quarter-deck for engaging the batteries on shore and for firing at the lock gates of the canal.

Two large flame-throwers were mounted in shelters, one abreast of the fore bridge and the other at the after end of the upper deck. Pom-poms, Lewis guns and Stokes mortars were mounted along the port side. Three pom-poms and six Lewis guns were mounted in the foretop to fire over the parapet and cover the assault. The foremast above the top was removed. The mainmast was removed and laid horizontally across the quarter-deck, the heel was embedded in concrete and the end extended several feet beyond the ship's side, to act as a bumpkin to protect the port propeller. Special fenders were fitted to the port side to protect the ship's side from the underwater projection of the Mole, and huge fenders were fitted to the port side of the fo'castle to take the first bump when she went alongside.

My first intention was to ram all the three blockships into the lock, if it was open—as seemed likely at high water with a bombardment in progress—and to sink one ship on each sill, but the depth of water at low spring tides in the

lock and its vicinity, where there was no silt, was 19 feet, with a rise and fall of 14 feet. I was advised that it would be possible at low water to cut away sufficient of the blockships to allow a submarine, or even a destroyer, to pass over at high water. Lying in such a narrow channel, it would also be easy to build coffer-dams to dry dock the blockships, and rig shears over them to facilitate the work of removing the obstruction.

On the other hand aerial photographs showed an immense accumulation of silt at the entrance to the canal, and two Belgians, who had escaped from the Zeebrugge dredger, told us that the depth at the entrance to the canal was so reduced that even small submarines were unable to pass through the Channel at low tide. They declared that the trouble arising from silt at Zeebrugge was serious.

I decided therefore to sink the blockships at the entrance to the canal, since with the assistance of silt, it seemed likely to form a more permanent obstacle. However I hated giving up my project of sinking a ship in the lock entrance—if the gate was open—or ramming the lock gate, and decided that the leading ship should do so; a far easier task, once the canal was entered, than swinging the two ships into exactly the right positions across it. If only two ships succeeded in getting into the canal, they would have to concentrate on blocking the channel at the entrance.

Two submarines were fitted out to blow up the viaduct, in case one was unable to reach it. A charge of five tons of high explosive was put in the bows with two or three alternatives for exploding it. To enable the submarines to be abandoned before colliding with the viaduct, a gyro-control was fitted, which would hold the submarine on a steady course when the right position was reached. Motor dinghys were towed from a boom projecting from either side of the submarine for the crew to escape in, when it was set on the required course and the fuses started. A picket boat was provided to follow the submarine and pick up the crew.

Meanwhile the training of the Marine Light Infantry battalion went on at Deal, that of the seamen at Chatham, and the Marine Artillerymen were given instructions in the working of howitzers and pom-poms at Shoeburyness. A lay-out of Zeebrugge Mole was made on King's Down near Deal, the officers and men were told that it was a position in France which they would be called upon to attack, and attack it they did, vigorously by night and day. Both bluejackets and marines were given instructions in trench warfare and close fighting with bomb and bayonet, as well as Lewis gun and rifle.

It was necessary to provide some form of camouflage for all this activity at Dover, Chatham, and Deal; I suggested that a letter should be sent to me from the Admiralty, marked "Most Secret," copies of which I sent to the Commanders-in-Chief and other authorities, but "inadvertently" I omitted the usual precautions which should have been taken when forwarding such a letter. The letter of 4th March was as follows:

"In view of the possibility of the enemy breaking through the line on the North Coast of France and attacking Calais and Dunkirk, a special battalion of Marines and a company of bluejackets will be placed at your disposal for reinforcements, and to act as demolition parties, etc., to destroy guns and stores. You are to make every preparation for blocking Calais and Dunkirk at the last possible moment, with the ships whose names have been given you verbally, so as to deny the use of these ports to the enemy if necessary."

This story got about as a great secret, and the enemy's March offensive gave color to it.

ON 3rd April the six old cruisers—*Vindictive, Thetis, Sirius, Intrepid, Iphigenia,* and *Brilliant*—joined the old battleship *Hindustan*—which was used as a mother ship to house some of the men of the crowded ships—in the Swin, where they were joined by the two ferry-boats *Iris* and *Daffodil.*

On 6th April the 4th Battalion of Marines embarked in a transport at Dover "bound for France," but when well clear of the land, course was altered for the Swin, where the men were transferred to the *Iris* and *Daffodil.*

In the Swin—an anchorage in the Thames Estuary—the ships were out of sight of land, and the only correspondence allowed was by active service postcards. I went to the Swin the next day and visited all the ships and spoke to the assembled ship's companies and told them the real object of the training they had undergone.

The total striking force numbered 142 vessels (excluding 23 of the Harwich force, which, under the command of Commodore Tyrwhitt, were to cruise to the northward to prevent any interference from enemy ships coming from the Heligoland Bight).

In addition to the 8 ships in the Swin, 74 vessels were working from Dover and 60 from Dunkirk (including 7 French torpedo craft) carrying out the ordinary duties of the Dover Patrol.

I confided the command of the attack on Ostend to Commodore Lynes—who commanded my advanced base at Dunkirk—and I intended to lead the attack on Zeebrugge myself—flying my flag in H.M.S. *Warwick*—a destroyer.

On 9th and 10th April, the first two of the five possible days of the moonless period, the weather was unsuitable; on the 11th the meteorological report was promising and our Armada put to sea.

There was a gentle north-easterly wind and the sea was smooth; but when we were only about 16 miles from our objective, the wind dropped, shifted and blew off shore. I knew that it would be suicidal to approach the coast unscreened by smoke, and I went through a pretty difficult and trying time during the next few moments, as it was essential to make a decision immediately. I was terribly tempted, it would be so much easier to go on, and trust to the God of Battles and the good fortune of the Navy, for a happy issue. However, the wind being definitely against us, I made the fateful signal, one word on the wireless, which cancelled the proceedings for the night.

On 13th April, the last possible day of the moonless period, we set out again, but it came on to blow very hard and was too rough for the small craft, so once again we had to return.

The Admiralty had decided that the expedition must be cancelled; as it could no longer be a surprise, the news would be certain to reach Germany, during the three weeks which must elapse before I could renew my attack. However, I told him that it would be high water about midnight in ten days' time—although the moon would be full—and

I persuaded him to let me have another try then.

The 22nd April was the first possible day of the full moon period and the weather report was not too bad, and though it might have been better, the period might well pass without a more favourable opportunity, so I made the preparatory signal, which put the whole enterprise in motion once more.

AS we approached Zeebrugge, the *Warwick,* followed by the destroyers *North Star* and *Phoebe,* drew ahead, to drive off any enemy destroyers which might be patrolling off the port; we then remained close to the Mole, to protect the boarding vessels whilst they were alongside it.

Motor launches, supported by other destroyers, went to their allotted places to make the smoke-screen, and C.M.B.s tore backwards and forwards across our front, laying the first line of smoke to cover our advance.

The whole operation was governed by a time table, which was strictly adhered to, with one unfortunate exception; a misty drizzle, which started about an hour before we arrived, prevented the aircraft finding and delivering their attack on the Mole, and when the *Vindictive* arrived, a few seconds after midnight, the garrison was alert and at their guns, and the smoke being blown back at the last moment, the assaulting force suffered heavily from shell fire, as she went alongside, and her Captain went through a very trying time.

Aerial photographs had clearly shown a fortified zone about 150 yards from the end of the Mole, protecting the battery from a land attack. It was therefore my intention to lay the *Vindictive* alongside the Mole, as near as possible to the guns, which were on the extension. The bluejackets were to storm the guns and the Marines attack the fortified position from inside. They were then to advance down the Mole, covering bluejackets with demolition charges.

Unfortunately the *Vindictive* went on too far, and was eventually berthed—with the assistance of the Daffodil—340 yards beyond her planned position, and although the assault was carried out with the greatest gallantry, the attacking force was unable to capture the guns, as they were held up by the wire and machine guns of the fortified zone, which was now between them and the guns at the end of the Mole.

The *Daffodil* played an invaluable part, by pushing the *Vindictive* alongside the Mole, and keeping her there throughout the action.

The *Iris* was unable to secure herself alongside the Mole, in spite of the heroic efforts of two young officers, who were killed on the parapet, while attempting to place her grappling anchors.

As the leading blockship, the *Thetis,* passed the end of the Mole, at the appointed time, bound for the lock gates of the canal—which she was to ram—she came under a devastating fire from the uncaptured Mole end battery, and sank before she reached the canal entrance.

The *Intrepid* and *Iphigenia* were successfully sunk, however, across the canal in their allotted positions.

Four motor launches had been detailed to follow the blockships in, to rescue the crews if possible. One was sunk, one broke down, one saved the survivors of the *Thetis,* and the fourth—"M.L. 282"—saved the crews of both the other blockships, in spite of tremendous machine-gun fire from the banks of the canal, which caused many casualties.

One submarine failed to arrive in time, owing to her tow parting, but the other, "C.3," rammed the Mole viaduct most successfully and blew a 100 foot gap in it; her gallant crew of two officers and four men disdained to make use of the gyroscopic gear and did not abandon their vessel till she was firmly wedged between the piers of the viaduct. They then escaped in their motor skiff, which was riddled with machine-gun bullets, and in a sinking condition, the motor being smashed, they had to row hard to get far enough away from the explosion of the submarine. The Captain and three men were badly wounded, when picked up by the rescuing picket-boat, which was commanded by the Captain's brother.

The *North Star* was sunk by gunfire, when she emerged from the smoke, but most of her crew were saved by the *Phoebe.*

Having seen the blockships in the canal entrance, and watched the safe withdrawal of the *Vindictive* from the Mole, I returned to the entrance of the harbour in the *Warwick* to look for the rescue motor launches, and was fortunate to meet "M.L. 282" struggling out, simply packed with men from the *Intrepid* and *Iphigenia,* who stood up and cheered wildly, when they saw the *Warwick.* I told them to come alongside, and 101 men were counted out—including a good many killed and 20 odd wounded. I doubt if she would have been licensed to carry fifty passengers in the calm waters of the Thames.

Some things that night stand out in my memory. The amazing brilliance of the enemy's star shells, which turned night into day.

The efficiency of our smoke-screens, which hid us in safety, until we had almost reached our objectives; then when at length the enemy became thoroughly alarmed, the roar with which the great shells passed over our heads like express trains, when the enemy's batteries, still unable to see us, put down a tremendous barrage, which, fortunately, plunged harmlessly into the sea some miles behind us.

The great flame which shot into the sky and told us that the submarines had done her task, although we could not distinguish the sound of the explosion in the roar of the battle.

The intense relief I felt, when I knew that the battle was joined, and that there could be no more turning back, and that the issue then lay with the men and the young officers that led them so bravely.

There were many conflicting accounts about the effects of the operation. The Germans were able to use their base but with a reduced number of submarines. Bruges Harbour was successfully blocked. The effort to block the harbour of Ostend failed but another effort was made the following month, when the *Vindictive,* loaded with concrete, was sunk in the channel entering the port but only partially obstructed it. The Germans were completely deprived of the Belgian base late in September, 1918 when the British 2d Army drove the German line to the eastward of Ostend.

Air Strategy for Victory*

By General Henry H. Arnold, Commanding General, United States Army Air Forces

STRATEGY is the art of war and is concerned with the ability to concentrate military force on the enemy at a given time and place. Air strategy involves all the methods by which a nation impresses its will through the use of air power. It concerns the selection of the enemy targets and the best means of their destruction from the air.

Strategy is as old as history and its general principles have changed but little down through the centuries. Air strategy, however, is as new as the long-range heavy bomber, with its ability to span oceans and continents with loads of destruction.

America's air doctrine for years has been based solidly on the principle of long-range bombardment. Air forces are strictly offensive in character. This was not generally appreciated until recently, and efforts to gear our Air Force solely to defense or to limit it strictly to coöperation with ground forces were bound to fall short of our requirements.

No longer are broad oceans or "Maginot Lines" regarded as sufficient protection. *War has become global.* Statesmen as well as general and admirals have been forced to study globes as well as maps, and many radical readjustments in thinking have resulted. Air power has shrunk distances so that we no longer speak of a place as so many thousands of miles away, but so many hours.

Modern war is three-dimensional. No longer are armies and navies to be regarded as effective means of preventing enemy incursions. *War has become vertical.* We are demonstrating daily that it is possible to descend from the skies into any part of the interior of an enemy nation and destroy its power to continue the conflict. War industries, communications, power installations, and supply lines are being blasted by attacks from the air. Fighting forces have been isolated, their defenses shattered, and sufficient pressure brought by air power alone to force their surrender. Constant pounding from the air is breaking the will of the Axis to carry on.

The days when a nation depended wholly on its army and navy for victory have gone forever. *War has become total.* Air power brings the reality of war to the people as a whole. The laboratory and the factory, the mine and the field—all the nation's resources must be mobilized. There will be no permanent victory in the air or on land or sea without victory on the home front and that means that the enemy home front is a part of our legitimate target for air power. And the air strategy which brings victory must not be scrapped when the last bomb is dropped. For the security of a world in which the air will be a dominating factor our wings must not be clipped.

There are three principal ways in which air power can be used—strategically, tactically, and logistically. These three aspects of air power stem back into the roots of American air thinking.

Strategic air power is a war-winning weapon in its own right, and is capable of striking decisive blows far behind the battle line, thereby destroying the enemy's capacity to wage war. The highest development of strategic air power in the war to date is found in the activities of the Royal Air Force Bomber Command, our 8th Air Force Bomber Command (now called Strategic Air Force), and Major General Doolittle's Strategic Air Force, one of the component parts of the Northwest African Air Forces, commanded by Lieutenant General Spaatz.

People are only now realizing what a vital part strategic bombing played in the earlier part of the African campaign. All through the summer of 1942, General Brereton's *Mitchells* and *Liberators* and RAF *Wellingtons* and *Halifaxes* were smashing Axis docks and shipping at Tobruk and Bengasi, and ports in Crete and Greece. More than two-thirds of the shipping laden with supplies for the Afrika Korps was sunk, and large numbers of Junkers Ju-52 transports shot down. Rommel's heavy supply line was dried up by long-range air attack.

In the Tunisian campaign this operation was repeated on a grand scale by Major General Doolittle's Strategic Air Force and other elements of RAF Air Marshal Tedder's Mediterranean Air Command. By blasting away at airdromes, ports, and shipping and shooting large numbers of air transport planes and huge powered gliders out of the air in some of the most dramatic actions of the war, we were able to isolate the Axis forces and effectively prevent their being reinforced with troops, supplies, and equipment.

Strategic air power based in England played an important, although indirect, part in the battle for Tunisia by crippling or destroying war plants in Germany and occupied France. Production of new machine tools, antiaircraft guns, motor transport, aircraft, engines, and tanks was slowed down and their flow to the front further reduced by disrupting railroad yards, blasting bridges, blowing up locomotives and freight trains.

Deprived of the weapons of war, the Axis forces collapsed as soon as the terrific drive on the battlefield, by coordinated ground and air forces, really got under way. Thousands of lives were saved, and weeks of time, as compared with the mile by mile, village by village method of classical warfare, which has always proved so costly in a war of position. By this action we again proved the sky road to both Berlin and Tokyo can be utilized to the full to blast the heart out of the citadel before our combined operations take over for the final drive.

The Army Air Forces principle of precision bombing, aimed at knocking out not an entire industrial area, nor even a whole factory, but the most vital parts of Germany's war machine, such as the power plants and machine shops of particular factories, has had many illustrations during the past few months. The mission against the submarine works at Vegesack in March was a notable example of precision bombing. With their eyes on the targets, and using an automatic device enabling them to exercise direct control of the

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plane during the bombing run, our bombardiers dropped some 250 tons of bombs, hitting seven out of fifteen submarines actually in the construction ways, and inflicting heavy damage on the power plant and seventeen other key buildings.

On May 14, in the 1,000-mile round trip mission against the U-boat yards at Kiel the actual bombing results were even better. About 287 tons of bombs were dropped by 125 of our heavy bombers, and reconnaissance photographs indicate that nearly every bomb landed smack in the target area, inflicting terrific damage.

A secondary result of these engagements (each one of which is sufficiently important to call an air battle) is that the Luftwaffe has been forced into defensive action. Single-engined day fighters of the latest types, including souped-up, heavily armed versions of the Messerschmitt Me-109 and Focke-Wulf Fw-190 are being thrown in with desperate determination to stop these bombings at any cost, and many such fighters have been shifted from other areas. We have proved that they cannot stop us. Our heavy bombers are shooting them down in substantial numbers, and recently we have had the added protection of a number of modified fighter versions of the *Flying Fortresses,* so heavily armed they are called "flying hedgehogs." Knocking the Luftwaffe out of the skies continues to be one of our main jobs. During April, May, and June our bombers and fighters shot down 821 German planes over Europe, against 183 of our own, a ratio of 4½ to 1; including "probables" it is about 6 to 1. In order to hold their own the Luftwaffe would have to destroy our planes at the ratio of 2 to 1. There is growing evidence that the Luftwaffe, spearhead of the early Nazi triumphs, will prove to be the Achilles heel leading to the collapse of Hitler's ill-fated "new order."

AN outstanding example of the possibilities of strategic bombing dealing a powerful, paralyzing stroke, is the great attack on the Rumanian oil refineries at Ploesti by 177 *Liberators* of the 9th Air Force, Middle East. It is the most important single air blow of the war to date.

Two air engagements which took place during the first half of 1943 will have an important place in the history of warfare. The first is the remarkable victory of the Bismarck Sea during the first four days of March in which land-based air power alone decisively stopped and then annihilated an enemy invasion fleet. The second was the virtually all-air conquest of Pantelleria in June, another milestone in the development of military aviation.

The Bismarck Sea victory was notable for its completeness, for the perfect integration of various parts of the attacks, and as an example of direct air assistance to ground forces by destroying an enemy division, with its supplies and equipment, before it could even get into action.

Probably the most far-reaching effect, however, was its conclusive demonstration of the effectiveness of minimum altitude bombing, sometimes referred to as skip-bombing, a phrase which is hardly descriptive of the main features of this important new technique. Developed at Eglin Field early in 1942, each theater has worked out its own application of the basic theory. It has been used with great success in the Mediterranean and the Aleutians as well as the Southwest Pacific, and has its applications to land as well as sea operations.

On the island of Pantelleria the all-out air assault was so overwhelming and so concentrated that the defense was saturated and surrender became inevitable. This engagement has often been compared to Crete, but the difference is fundamental. Crete was lost to airborne troops who landed and fought it out with defending ground troops. The white cross on Pantelleria's battered airdrome before a single soldier or sailor landed is a symbol of the ability of air power to capture any citadel once its own supremacy in the skies is established, and provided a sufficiently sustained and powerful air assault can be brought to bear against it. It is simply a matter of mathematics (or physics). While air assault is not without cost, this type of warfare is actually cheapest on all counts and it is by far the greatest economizer in human lives.

THE American doctrine of total air power, while emphasizing the possiblites of strategic bombing, has always included the idea of close coöperation with ground forces as a team. In our development of attack aviation in the early '20s it was established that the air arm was not to be regarded as merely for support of ground actions, but that it could act by itself, under the high command, by attacking from the air the same objectives as the infantry and artillery attacked from the ground.

This principle has seen its finest development to date in the operations of the Tactical Air Force in the Tunisian campaign. General Montgomery of the British 8th Army was convinced that to secure the concentration and the flexibility required of air power on the battlefield, the air operations should be under an air commander, the ground operations under a ground commander, and that both of these officers should be on the staff of the commander-in-chief of the theater and work together in the closest possible coöperation. This was done in Tunisia, and together with the work of the Strategic Air Force and the equally vital (if less spectacular) services of the Coastal Command, the Air Service, Air Engineer and Troop Carrier units, the Reconnaissance Wing, and the Operational Training Command, the results were terrific. A pattern for victory has been clearly established.

Another highly significant development of the present war is that at last logistics, the art and science of military supply, has taken to the air on a grand scale. This does not mean, of course, that any considerable bulk of the requirements of the Air Forces (or of the Army generally) are being flown to the combat areas in transport planes. Shipping is vital in this war of immense distances, and our country's outstanding performance in exceeding its heavy quota of merchant ships and getting the stuff to our widely scattered theaters of operation will constitute no small part of the final victory. However, it is unquestioned that the remarkable spread of American air power to ten fighting fronts in all parts of the world within less than a year of the attack on Pearl Harbor is very largely due to the rapid pioneering development of the Air Transport Command. Organized in May, 1941, to ferry lend-lease planes, the ATC has expanded in a little over two years to a world-wide airline operating more than 110,000 miles of airways over five great routes, with all the airfields, hangars, gasoline storage facilities, communications, and weather reporting service that this implies. Over these routes a steadily increasing stream of combat planes is being ferried daily, with impressive quantities of supplies and key personnel.

Morale*

MORALE depends on the incentives to human action, on men's motives, on their emotions and how they react to their emotions. It can be developed in a military unit by the control of those psychological conditions which determine men's desires and conduct, and affect their attitudes toward one another and toward the great undertaking of winning a war.

Hunger is a mess call most sure to be heard. Pain is an alert seldom missed.

The most primitive incentives for action, which man shares with other animals, are his bodily needs. Hunger. Thirst. Sex. The need for rest when he is tired. The need for activity when rested. The desire to escape from pain, extreme heat, extreme cold, and other intolerable conditions.

It might be possible to control men or animals by the use of these incentives. You might make a man go hungry until his work is done, and then let him eat as a reward. You might make a man fight by lashing him, then letting up on him as a reward for fighting.

But that isn't the way our Army works. Whenever possible it supplies enough food and rest to its soldiers and makes other provisions for their comfort so that they stay in good spirits and can do their work well.

But in fighting areas it is not always possible to provide these physical comforts. When food or water is short, when the weather is too hot or too cold, when it becomes impossible to bathe and shave, when bombs and shells drive sleep away, and fatigue makes effort a torture, problems of combat morale may arise. And then some other incentive is required beyond their animal needs to keep men going—to make them determined to keep on fighting unto death.

When the primitive needs are no longer enough, it is the social incentives which help a fighting man to do his utmost. There are many social needs, and here are some of them:

(1) Desire for social approval, admiration, recognition, appreciation.

(2) Desire for security, safety, escape from danger and disapproval; fears of all kinds.

(3) Desire for power, mastery, domination, superiority, self-assertion.

(4) Desire for adventure, new experience, freedom; escape from futility, humdrum.

(5) Desire for personal response, companionship, friendship, love.

(6) Desire to help and protect others (especially the weak and helpless, such as children).

(7) Desire for successful achievement, completeness, effectiveness; the desire to do a "good job."

(8) Desire to destroy interference with other desires; aggression, rage.

When a military leader calls a man by name and gives him a simple word of commendation for some task well performed, he is appealing to at least two or three natural incentives. Calling the man by name shows personal interest which almost every soldier likes. The commendation is social approval. If the soldier has been feeling insecure, not quite sure of things, then perhaps his sense of security is established by the event of his leader's approval. He also has assurance that he has accomplished a job well done.

Social approval is a strong motive in human affairs, and in general praise is much more effective than blame. Commendation can get results when bawlings-out fail. Reproof tends to leave resentment. Blame is often, however, effective when used in private and in moderation against a man whose quality of performance is high, for he will work hard to avoid such criticism. A man wants to count, to amount to something, to feel that he is worth while and appreciated. Promotions, citations, and distinctions of all kinds help serve this purpose.

Fear of the disapproval of others or of some other punishment works as an incentive, but it is not good as a steady thing. Troops coerced to action by a snapping martinet become anxious, disgruntled, jittery. There is a loss in morale, in initiative, in judgment, and even in skill.

MEN do better in groups whether fighting or working. This is only partly because competition enters. The good performance of one soldier stimulates another to improve. But also, the sense of being engaged in a group activity makes working or fighting easier, even when each soldier is doing a different part of the job so that there is no competition. In most forms of work the worker produces more and is happier if other workers are working alongside.

It is easy to see how the other incentives control Army activities. The desire for superiority works itself out in competition for promotion. The desire for adventure or new experience may lead a man to volunteer for a dangerous mission, or perhaps it merely leads him to ask for a furlough. The desire to help others becomes a loyalty to comrades or help for a wounded friend. This is so strong that it is used in armies to overcome the civilian's natural repugnance to death. A soldier will voluntarily aid in burial of the dead as a final mark of consideration to his friends.

A soldier's desire to do a good job, his sense of workmanship, is helped whenever he can be allowed to understand the nature of the whole undertaking to which he is contributing. A successful leader never assigns tasks blindly when he can reveal their larger purpose. By allowing his men to see the significance of their own smaller jobs, he dignifies the lesser tasks by relating them to the large one. When the workers at the General Electric Company found that certain mysterious plastic somethings they were making had helped General Jimmy Doolittle steer his plane over Tokyo, production jumped three hundred per cent practically overnight.

In addition to the social incentives, there are many personal incentives—the kind that might still determine what a man did if he were alone on a desert island. Self-regard is one. A man wants to be a certain kind of person and feels

*From *Psychology for the Fighting Man.* Available at 25 cents a copy from Marine Corps Association, Headquarters, U. S. Marine Corps, Washington 25, D. C.

ashamed when he fails. He wants to do what he thinks is right, whether that rightness be the dictates of a Christian conscience or the code of honor of the group or gang. Ambition and aspiration come in here. For the most part it is these personal incentives which tend to make men different from each other and to establish the rule that there are individual exceptions to all the other rules of human motivation.

MORALE is the capacity to stay on the job—especially a long, hard job—with determination and zest. It is the opposite of apathy.

Morale needs good health—physical and mental. Unless the body is well and vigorous, it is pretty hard to endure hardship and keep up enthusiasm. Fatigue and illness sap mental vigor and moral strength. The body does influence the mind. Yet there is more to morale than that. Men can carry on with strong determination, sometimes even with zest, through injury, disease, and physical privation—through such things as the men on the *Lexington* underwent. What makes them do it?

For that sort of morale a man needs self-confidence and conviction. He needs to feel sure of himself and emotionally secure. While there are no simple rules for obtaining this sense of security and confidence when the world is blowing up around your ears, some of the conditions that bring it are known.

It helps to have grown up in a home where there was no quarreling or jealousy. It helps to have friends, and to be working or fighting in a group. It is essential for the job to seem important, for it to be related to some of the incentives to human action. A thoughtful man may need to see the job in its larger relations, to fit it into a philosophy of life, to make it a means of satisfying his own code of what is good and desirable. He may need to take a long-range view that extends even beyond his own lifetime and perhaps into another world. All the incentives to human action are potential morale builders.

There is a back-and-forth relation between work and morale. Not only does morale make soldiers work and fight—working and fighting keep up their morale. Especially in times of emotional stress, as in battle, does a man need to be doing things. As for work alone, men are not naturally lazy. People like to work. Enforced idleness is a cruel punishment.

It has been shown again and again that persons with useful jobs to do in air raids are unlikely to be afraid of bombs. They are busy and their morale is good. They carry on, because they have important useful work to do. Actually they feel secure—even in an air raid, which is a strange place to feel secure! It is the same with a trained soldier in the midst of combat.

But this kind of security is a security of the mind, the feeling of confidence that can become independent of the existence of physical danger.

In some units of an army, morale is bad, in some it is good. Everyone knows about these differences when they are extreme, but there ought to be ways of measuring morale and rules for improving it. To some extent there are both.

If an officer wants to assess the morale of his own unit, there are at least two things for him to do.

He can listen. Men will talk when permitted or encouraged to, and they will sometimes speak freely. When they do, they give their leader information that will enable him to answer these questions. Do the troops feel they are being well trained? Well led? Do they think their weapons are adequate? Do they want to get at the enemy? Are they proud of their unit? Do they have suggestions for its improvement? Do they think they get fair treatment? Fair chances for advancement? Are they worrying about anything back home? Or about what will happen when the war is over? From the answers to questions like these an officer can usually estimate accurately the morale of his unit.

He can also study the behavior of his men. Are they ready to volunteer for special duty? Are there frequent violations of discipline? How many are AWOL? How many in the guardhouse? What is the rate of venereal disease? How do they receive bad rumors? Are there many fights, and are the fights based on religious or racial differences?

All these things are symptoms. If he notes them systematically, an officer or noncom may even be able to correct his own earlier beliefs about the morale of his unit.

Morale building is a primary task of leadership. Any leader trying to improve the morale of his unit will find these rules helpful:

(1) Make each man feel he is needed by his unit, that his job in it is important.

(2) Never let a man forget that he is a soldier and that a soldier of the United States is an important and respected person.

(3) Make it very clear that the unit has its own important function in winning the war.

(4) Encourage the expression of pride in the achievements of the unit.

(5) Give commendation and encouragement when it can sincerely and appropriately be given, for fair appreciation usually works better than condemnation.

(6) Never belittle or humiliate a man in front of others except when a military emergency, as in battle, may require quick correction. When rebuke is necessary, do it in private, and make it clear that it is the act that is punished, not the man.

(7) Keep idleness at a minimum, but make recreation possible.

(8) Train each man in every useful task and action that actual combat will require, and teach him that these habits will reduce his fear when combat comes, as well as make him a trained and able fighter.

(9) Let men work together in groups whenever possible, because social relation increases effectiveness.

(10) Let the soldier on isolated duty feel that he is an indispensable man, not a forgotten one.

The foregoing article is from *Psychology for the Fighting Man*, a little book published under the auspices of the *Infantry Journal* that contains a wealth of valuable material. Copies may be obtained from the Marine Corps Association, Headquarters U. S. Marine Corps, Washington 25, D. C., at 25 cents each postpaid.

How the Russians Counter Enemy Wedges

Passive Defense is Fatal

By Major S. Sretensky, Red Army

THE basic principle of Nazi tactics is to drive deep wedges into the opponent's defense and pierce the front, thus enabling the panzer units and motorized infantry to maneuver in the open spaces behind the defense lines. By this method the Germans try to ensure a rapid advance to important operational objectives while the infantry holds the corridor created by the break-through, trying to engage and isolate the defenders and gradually to encircle and annihilate them.

German piercing tactics are based on so-called "wedges." The tank column forming the spearhead is supported by motorized infantry following in its wake. As a rule the Nazis tackle a narrow sector, on which they concentrate a preponderance of men and material.

The following example is typical of such operations. Early in July the enemy sent a tank and motorized infantry division to attack the junction of two Soviet battalions holding defense positions. The advance was preceded by successive raids by groups of 32 bombers each, with heavy fighter escort. As soon as the Luftwaffe had completed its work, the panzer column launched its assault. The first enemy echelon consisted of 100 tanks and a complete infantry regiment.

The Soviet rifle units allowed the panzers to pass and concentrated all their fire on the German infantry. The Nazis succeeded in capturing only part of the defense position of one Soviet company. The main German force retreated, after losing 30 tanks and some 800 men killed. The same night the Soviet troops launched a counterattack and regained the lost position.

A break-through on a narrow front is fraught with danger for the attackers, since it drags them into a fire trap and leaves their flanks exposed to artillery and rifle fire. Every officer who understands the nature of the German maneuver turns this situation to good advantage.

It is the task of the defense commander, without allowing the enemy to penetrate to any depth or to widen the break-through, to hold resistance centers at the flanks of the break-through till reserves can be brought up. Then, in a series of counterattacks, the Nazi wedge can be cut through at its very base.

To illustrate this point I shall describe a recent maneuver by a certain Soviet infantry battalion. Two companies of this battalion were holding defense positions in the advance echelon, each with a platoon in reserve. Another company formed a second echelon. The commander had made excellent use of the terrain, and had fortified not only his front line positions, but in depth as well. The slope of the hillock facing the enemy was well intersected with antitank traps. The woods behind the second company's position had been transformed into an antitank resistance center. An antitank ditch intersected the entire stretch between the hillock and the woods, while the left bank of a small river had been dug out to hinder tank operations. The third company had prepared reserve positions between the hillock and the woods and the third platoon of the first company had a spare position at an important vantage point in the rear. The battalion commander, by organizing the defense in this manner, counted on catching the enemy panzers in a fire trap.

THE German offensive began with the usual preparatory maneuvers to clear the ground for a wedge operation. From early morning the battalion was subjected to repeated air attacks, and for forty minutes the Nazi artillery shelled all its positions intensively. Under cover of the Luftwaffe and the artillery barrage, the enemy tanks and infantry took up advance positions for the attack. The artillery barrage did the Soviet troops no harm, as they had sturdy shelters, and at no point did the enemy succeed in hampering our system of fire. Then the Luftwaffe shifted its operations to our diyisional reserves, and the German artillery transferred its fire to the Soviet artillery positions in the rear. At that moment the panzers were hurled into battle, with the infantry following close at their heels.

The appearance of the panzers was the signal for all the battalion's guns to come into action. Antitank guns and rifles opened up against them, while mortars, machine-guns, and rifle units concentrated on the advancing German infantry. The artillery unit supporting the battalion raised a screen of fire. In a few minutes a dozen enemy machines had been accounted for. The Germans succeeded in breaking through to the river, only to find themselves countered by ambushed tank destroyers and numerous land mines. As the panzers slackened their pace in an attempt to ford the stream, the tank destroyers crept up and destroyed several of them with fire-bottles.

Fifteen minutes after the launching of the German

attack the situation was briefly as follows: The panzer column had lost some 15 machines; the German infantry had been cut off from the tanks and stranded in the open field. The Nazis had no choice but to turn back and withdraw their infantry to their original attack position.

A second German thrust was launched under cover of even more vigorous air bombing and artillery fire. This time the panzers advanced in two columns, the tanks following each other in close succession. Disregarding their losses, the Germans forged ahead. Some of them were nearing the junction of the two companies in the advance echelon, while others were about to cross the river; some machines in fact got as far as the first platoon of the second company.

With terrific force the panzers pushed ahead into the depth of our position. The Nazi infantry began to encircle the right flanks of the second company. The battalion commander decided on a bold step. He ordered the third platoon of the first company to withdraw to the third company's reserve position. This demonstrative withdrawal diverted the main German force.

The third company, supported by a platoon of antitank rifles and a platoon of antitank artillery, was quickly shifted to a fortified position in the rear of the first company. The latter in turn was ordered to bend its left flank, while the second company bent its right flank. The German tanks, having broken through to the depth of the battalion's position, were looking for a route to attack our artillery positions. They partly succeeded in doing so, by maneuvering round the left of the woods. The Nazi infantry, just as the battalion commander had anticipated, pursued the third platoon of the first company in its demonstrative withdrawal.

Meanwhile our gunners dealt effectively with single tanks attacking our artillery positions. The remaining German machines turned towards the hillock, but here too they were countered by the third company's well organized antitank defense. The left flank of the German infantry was thus exposed to our third company, while the German tanks were rushing about searching for a way out of the fire trap.

The battalion commander decided that the time was ripe for a counterattack, which was carried out by the third company. Acting with the utmost vigor, our men crushed the flank of the German infantry, while all the battalion's antitank guns were brought to bear on the panzers.

A terrific infantry duel lasted for some 40 minutes. When it was over it was seen that only a small group of German riflemen, plus several tanks, had succeeded in breaking through to our lines, and these were quickly disposed of. Twelve tanks and no less than two companies of German infantry had been annihilated by the battalion.

ANOTHER Soviet battalion was attacked by a wedge force in much the same manner, but instead of striking at the advancing enemy with the troops of the second echelon, the battalion commander decided on passive defense.

His reserve company was not employed to attack the enemy flank, but was very unwisely ordered to withdraw to a reserve defense position. This passivity resulted in the dismemberment of the battalion's formation, and soon its units were outflanked by the enemy infantry. Our companies were slowly losing strength, ammunition was running low, and every minute diminished the resistance power of our men and guns. The Germans had no great difficulty in battering the second echelon, and thrust their tanks forward against scattered units, which, deprived of centralized leadership, found themselves in a grave situation.

These descriptions of German tactics and our countertactics allow certain deductions. The German advance is based on high maneuverability, consequently the defense too must be mobile. No matter where the enemy tries to pierce our lines, he can and must be checked by the fire of our front line defenses. Any enemy force that does manage to wedge into our positions can and must be destroyed by a rapid countermaneuver by our second echelon troops. Steadfastness and maneuverability are indeed key factors in countering and defeating any advancing enemy.

Protection of Flanks and Junctions

By Colonel S. Gavrilov, Red Army

IN 19 months of war with the Germans, Soviet commanders have carefully studied the enemy's tactics, in particular his methods of breaking-through and of "wedging in." These tactics are essentially simple. They are based both on the maneuverability and mobility of the German formation and on the principle of "psychological" pressure against the Soviet troops.

The Germans strive first of all to discover weak points in the Soviet defense, to locate the junctions and the flanks. With this purpose in view, they send ahead over a wide front groups of automatic riflemen on motorcycles or light tanks. Shooting at random, these groups whirl up to the extreme front of the Red Army units, expecting our men to open fire on them and thus expose the fire system of their defense, revealing both its weak sections and strong points.

By the intensity of the fire the Germans also try to determine both the junctions between the Soviet subdivisions and their flanks. At points where the Nazis encounter an appropriate fire resistance they immediately retreat, fling themselves along the front in another direction and start swooping again. Whenever German mobile troops succeed in wedging into the Soviet defense lines, they immediately endeavor to develop their success, to deepen the wedge and to extend the break-through at both sides by introducing new mobile groups and bringing pressure to bear upon the newly-created inner flanks of the Soviet subdivisions.

ALL these simple German tactics have been thoroughly studied by the Red Army commanders, and are being counteracted in various ways.

First of all, special firing weapons are detached to prevent the premature detection of the actual defense line. Fire at German automatic riflemen is opened from reserved positions which are switched about, and the principal positions are occupied only when a general offensive of the Germans becomes apparent. This serves to lead the enemy astray as to the principal weapons and their positions, and thus helps to conceal the junctions between units.

Besides setting up different kinds of entanglements and obstacles for the protection of junctions and flanks, the Soviet command detaches fire groups consisting of artillery, mine-throwers and machine-guns, or entire rifle subdivisions, strengthened by fire weapons. In turn, every commander of a given subdivision takes all the necessary precautions to protect not only the exterior, i.e. open, but also the inner flanks of these units.

In one of the recent battles southwest of Kletskaya, the Germans concentrated on a narrow sector a force of tanks and motorized infantry, intending to strike at the junction of two Soviet regiments. The command of the Soviet division took timely precautions to protect this junction. A sufficient quantity of guns was stationed behind it. For the protection of their flanks the commanders of the regiments detached mine-throwers, machine-guns and crews of antiaircraft riflemen. A fire "pocket" was thus formed.

German tanks and motorized infantry, reinforced by self-propelled artillery, launched an attack. The tanks moved ahead at an angle and the motorized infantry, supported by automatic artillery, advanced on the flanks. No sooner did the enemy reach the intended border lines where distances had been measured than he was encountered by cross-fire both from the front and the flanks. The left flank of the Germans failed to withstand the fire and began to retreat. Their withdrawal was at first comparatively organized, but later became disorderly.

It is not necessary at all times to keep fire weapons for the protection of junctions and flanks inactive at the points fixed for them. But it is absolutely necessary to outline some kind of maneuvering plan so as to ensure their advance at any moment in the required direction.

A Soviet rifle battalion on a certain sector occupied a defense line on a wide front. The right flank of this battalion was the more exposed, as it bordered on a shrubby hollow and the unit on its right was nearly a mile away. The commander of this battalion, Second Lieutenant Varviankin, stationed two heavy machine-guns on this flank. He also placed in the space between the companies, which extended about one thousand yards, a rifle platoon with two heavy machine-guns and two crews of antiaircraft riflemen.

At night the enemy launched an offensive. As anticipated, the Germans took advantage of the hollow and attacked the right flank of the battalion. Here they encountered the fire of the two heavy machine-guns. About one hundred Germans pressed forward, supported by mine-throwers. The precise fire of the Soviet machine-gunners mowed them down like grass, but suddenly one machine-gun was put out of action and the other alone could not hold up the progress of the advancing enemy.

The battalion commander immediately grasped the situation and transferred to the right flank the heavy machine-guns stationed at the junction of the company of the first echelon. Checked by vigorous fire of three machine-guns, the Germans dug in, but were later counterattacked by the second echelon and forced to retreat to their initial position.

Having regrouped his forces, the enemy the next morning launched a frontal attack. About two German companies advanced, striking at the junction of the companies in the front line. Again the battalion commander maneuvered his firing weapons. The machine-gun company pushed three heavy machine-guns forward to support the rifle platoon, and the company of the second line was ordered to occupy its initial positions in order to counterattack near the right flank of the company in the front line.

The Germans, firing their automatic weapons, broke between the companies, pressed back a platoon, and penetrated as far as 300 to 400 yards deep into the battalion position. At this moment the machine-gun company opened frontal fire at the advancing enemy, and simultaneously both the flank and the rear of the Germans was counterattacked by a company of the second echelon. Out of the German company only a small group succeeded in escaping, while the others were completely wiped out.

In this way Soviet commanders in the field decipher the enemy tactics and prepare the defense both on the flanks and at junctions, maneuvering their fire weapons and manpower during the battle in accordance with the changing situation.

Decorations and Commendations

Major General William H. Rupertus, USMC, pins a silver star medal upon Colonel Amor LeRoy Sims, USMC, for gallantry in action on Guadalcanal.

GOLD STAR IN LIEU OF THIRD NAVY CROSS

Lieutenant Colonel Lewis B. Puller, USMC:

"For extraordinary heroism as a commanding officer of a battalion in the First Marine Division during action against enemy Japanese forces on Guadalcanal, Solomon Islands, on the night of October 24-25, 1942. While Lieutenant Colonel Puller's battalion was holding a mile-long front in a heavy downpour of rain, a Japanese force, superior in number, launched a vigorous assault against that portion of the line which passed through a dense jungle. Courageously withstanding the enemy's desperate and determined attacks, Lieutenant Colonel Puller not only held his battalion to its position until reinforcements arrived three hours later, but also effectively commanded the augmented force until late in the afternoon of the next day. By his tireless devotion to duty and cool judgment under fire, he prevented a hostile penetration of our lines and was largely responsible for the successful defense of the sector assigned to his troops."

NAVY CROSS

Major Odell M. Conoley, USMC:

"For extraordinary heroism while attached to the First Marine Division during action against enemy Japanese forces on Guadalcanal, Solomon Islands, October 26, 1942. While under tremendous fire during an assault by hostile forces, Major Conoley, with courageous initiative and skillful leadership, organized a group of Marines and counterattacked a numerically superior unit of Japanese troops who had seized a ridge previously held by one of the companies in his own battalion. After killing two-thirds of the enemy force and driving off the remainder, he and his group captured many rounds of ammunition and much equipment from the enemy. His heroic conduct, maintained at great personal risk in the face of grave danger, was in keeping with the highest traditions of the United States Naval Service."

First Lieutenant Eugene M. Key, USMCR:

"For extraordinary heroism while attached to the First Marine Raider Battalion during an attack against enemy Japanese forces on Tulagi, Solomon Islands, on August 7, 1942. When his platoon was attacked from the flank by a group of hostile snipers, First Lieutenant Key, although mortally wounded, worked his way forward until he could throw hand grenades into the enemy position. By his indomitable fighting spirit and outstanding skill, he destroyed Japanese resistance at this point and enabled his platoon to advance without further loss. His great personal valor was in keeping with the highest traditions of the United States Naval Service. He gallantly gave his life in the defense of his country."

Second Lieutenant Dale M. Leslie, USMCR:

"For extraordinary heroism in the line of his profession as pilot of an airplane in a Marine Aircraft Group assisting in evacuating a group of Marines surrounded by enemy Japanese forces from a beachhead on Guadalcanal, Solomon Islands, on September 27, 1942. Flying low over the water, Second Lieutenant Leslie, with utter disregard for his own personal safety, successfully directed the rescue boats to the trapped Marines. Then, in order to protect one of the boats which had been placed as a shield between the enemy and rescue ships, he continually strafed the hostile gun emplacements, skillfully drawing their fire away from the boat. During these operations, having spotted a man in the water, Second Lieutenant Leslie dropped a flare near him in order to attract attention and help effect his rescue, and when one of the ships, loaded with Marines, developed engine trouble, he directed a salvage boat to her assistance. His expert airmanship, courage, and fearless devotion to duty were in keeping with the highest traditions of the United States Naval Service."

Second Lieutenant Zennith A. Pond, USMCR:

"For extraordinary heroism in action against enemy Japanese aircraft while serving with a Marine fighting squadron in the Solomon Islands

area from August 20 to September 10, 1942. Alone, with utter disregard for his own personal safety, Second Lieutenant Pond courageously attacked and shot down six enemy planes. His outstanding valor and skillful airmanship were in keeping with the highest traditions of the United States Naval Service."

LEGION OF MERIT (ARMY)

BRIGADIER GENERAL FRANCIS P. MULCAHY, USMC:

"For exceptionally meritorious conduct in the performance of outstanding services in the South Pacific Area from June 30 to August 8, 1943. General Mulcahy displayed outstanding professional and organizational ability in controlling and directing all activities pertaining to aerial combat. He worked tirelessly under extremely hazardous conditions throughout the operations, and contributed immeasurably to their success. His thorough and complete spirit of coöperativeness, coupled with his unwavering eagerness to perform all desired missions, were of invaluable assistance to the Commander of the Occupation Forces."

SILVER STAR

SECOND LIEUTENANT STANLEY O. BENNER, USMCR:

"For conspicuous gallantry and intrepidity while in command of a platoon during action against enemy Japanese forces in the Lunga area, Guadalcanal, Solomon Islands, October 24, 1942. Undeterred by terrific enemy fire, Second Lieutenant Benner, displaying courageous determination, led his platoon and directed its fire against repeated assaults of enemy forces greatly superior in number. The combat achievements of his platoon under his inspiring leadership contributed greatly to the rout and virtual annihilation of a Japanese regiment. He gallantly gave his life in the service of his country."

SECOND LIEUTENANT HENRY H. CZESWIK, USMCR:

"For conspicuous gallantry and intrepidity during action against enemy Japanese forces on Guadalcanal, Solomon Islands, December 23, 1942. When a hostile strong point in front began to inflict severe casualties on his regiment, Second Lieutenant Czeswik, with alert judgment and courageous skill, personally led an eight-man patrol into enemy lines under a curtain of tremendous fire. In a violent engagement against a desperate and persistent foe, he and his men killed seventeen Japanese, wounded many others, and destroyed a great amount of arms and ammunition. By his astute foresight and inspiring leadership, Second Lieutenant Czeswik, without a single loss to his own patrol, delivered a striking blow against the enemy and successfully removed a dire threat to the security of our position."

SECOND LIEUTENANT CLAUDE L. GROUT, USMCR:

"For conspicuous gallantry and intrepidity while attached to a Marine battalion during action against enemy Japanese forces on Guadalcanal, Solomon Islands, December 19, 1942. While in charge of a point on a company patrol south along the Matanikau River, Second Lieutenant Grout, with courageous skill and utter disregard for his own personal safety, led his men to a position within fifteen feet of a hostile force of about eighty. Taking the enemy by complete surprise, he and his point moved in stealthily, knocked out four machine guns, killed thirty-seven Japanese, and withdrew without a single casualty. His inspiring leadership and persistent devotion to duty were in keeping with the highest traditions of the United States Naval Service."

MAJOR ERNEST P. FOLEY, USMCR:

"For conspicuous gallantry and intrepidity while attached to the First Marine Division during action against enemy Japanese forces on Guadalcanal, Solomon Islands, October 23, 1942. During the night, when hostile shells destroyed our communication with the batteries and broke off artillery supporting fire, Major Foley quit his position at the Fire Direction Center and, working his way through hazardously exposed areas, arrived at a battery command post. Here, with cool courage and complete disregard for his own personal safety, he directed artillery fire until communication could be reëstablished. His heroic devotion to duty, maintained at great risk in the face of grave danger, was in keeping with the highest traditions of the United States Naval Service."

SECOND LIEUTENANT LLOYD O. WILLIAMS, USMC:

"For conspicuous gallantry and intrepidity while attached to the First Marine Division during action against enemy Japanese forces on Guadalcanal, Solomon Islands, on the night of October 13-14, 1942. When tremendous bombardment by hostile warships set fire to an area occupied by the quartermaster of a battalion, Second Lieutenant Williams, with the aid of men from the ordnance section, quickly extinguished the fires, thereby preserving ammunition and property, and preventing Japanese ships from using the flames as target indications. Later, when an enemy spotting plane dropped an incendiary bomb in an ammunition dump, he braved a thick rain of hostile shell-fire to suppress the blaze before it could reach disastrous proportions. His heroic initiative, employed at great personal risk in the face of grave danger, was in keeping with the highest traditions of the United States Naval Service."

SECOND LIEUTENANT JOHN C. CRAIG, JR., USMCR:

"For conspicuous gallantry and intrepidity while in command of a demolition group on the Solomon Islands, January 15 and 16, 1943. Reconnoitering into hostile lines south of Point Cruz, Second Lieutenant Craig, in the face of tremendous machine-gun fire, boldly led his group forward and effectively dynamited four strong Japanese positions. The following day he and his crew, moving toward prospective targets under a curtain of vigorous shelling, destroyed two of the enemy's 77mm. field pieces and three ammunition dumps. His courageous devotion to duty, maintained at great personal risk in the face of grave danger, was in keeping with the highest traditions of the United States Naval Service."

LIEUTENANT COLONEL EDWARD W. SNEDEKER, USMC:

"For conspicuous gallantry and intrepidity as Division Signal Officer, First Marine Division, during action against enemy Japanese forces on Guadalcanal, Solomon Islands, on the night of October 13, 1942. When the opening salvos of gunfire from hostile warships interrupted all wire circuits on the division switchboard, Lieutenant Colonel Snedeker, realizing that the security of our beachhead was threatened by the probability of a land attack, personally took charge of a wire repair crew. With utter disregard for his own safety, he fearlessly exposed himself during more than one hour of intensive naval bombardment in an effort to restore communications. His heroic conduct, employed at great risk in the face of grave danger, was in keeping with the highest traditions of the United States Naval Service."

SECOND LIEUTENANT RICHARD R. AMERINE, USMCR:

"For conspicuous gallantry and intrepidity in action while attached to a Marine aircraft group in combat with enemy Japanese forces on Guadalcanal, Solomon Islands, on August 31, 1942. While on combat patrol over enemy territory, Second Lieutenant Amerine lost consciousness when his oxygen supply failed, but recovered in time to parachute to safety. After alighting on the water and discarding most of his clothing to facilitate swimming, he made shore and started to trek back through the jungle toward his base. Coming upon a Japanese soldier, Second Lieutenant Amerine killed him with a rock in order to secure his weapons. Although weak from hunger and hunted by the enemy, he succeeded in killing three snipers while working his tortuous way for six days through the underbrush. By his grim determination and indomitable fighting spirit he overcame almost insurmountable difficulties and finally reached his airfield."

SECOND LIEUTENANT CHARLES D. BARRETT, JR., USMC:

"For conspicuous gallantry and intrepidity while attached to the First Marine Division in combat against enemy Japanese forces on Guadalcanal, Solomon Islands, on October 5, 1942. When his platoon, advancing along a jungle trail east of the Matanikau River, was ambushed by strong hostile forces, Second Lieutenant Barrett, with utter disregard for his own personal safety and despite heavy Japanese fire, moved forward to the positions of each of his men and supervised their firing, coördinating the movement of the platoon on his left for an attempted encirclement of the enemy. Finally realizing that his men were facing overwhelming Japanese forces, he accomplished a withdrawal of the platoons with a minimum of casualties. His skillful leadership and cool courage were in keeping with the highest traditions of the United States Naval Service."

SECOND LIEUTENANT GEORGE B. GIERHART, USMCR:

"For conspicuous gallantry and intrepidity while attached to the First Marine Division in combat against enemy Japanese forces on Guadalcanal, Solomon Islands, during the month of October, 1942. Fighting with grim determination to defend a vital, tactical position protecting the airfield, Second Lieutenant Gierhart coolly and courageously exposed himself to the enemy in order to encourage his men and more efficiently direct the fire of his mortars and artillery. When his platoon had suffered numerous casualties, he assisted in manning an antitank gun with marked success. His heroic devotion to duty and inspiring leadership contributed to the repulse of the enemy attack and were in keeping with the highest traditions of the United States Naval Service."

CAPTAIN LOUIS C. DITTA, USMCR:

"For conspicuous gallantry and intrepidity while attached to the First Marine Division in combat against enemy Japanese forces on Guadalcanal, Solomon Islands, on October 26, 1942. Although wounded in the leg early in the morning, Captain Ditta refused to leave the battle-field and with daring tenacity manned a mortar, elevating it with his right hand as he fired with his left at the extremely close range of fifty to seventy-five yards. By his initiative, skill, and heroic devotion to duty he assisted materially in the success of the counterattack which completely repulsed the enemy."

CAPTAIN RALPH H. CURRIN, USMC:

"For conspicuous gallantry and intrepidity during action against enemy Japanese forces on Guadalcanal, Solomon Islands, January 15-17, 1943. Although in command of a reduced company, Captain Currin, in a ravine south of Point Cruz, launched a bold attack against an exceptionally strong hostile position equipped with machine guns, rifles, mortars and grenades. Under constant and tremendous fire from a fanatical foe, he and his men fought tirelessly for three days, capturing a great number of enemy

weapons and supplies and killing more than seventy Japanese. By his grim determination and inspiring leadership, Captain Currin contributed to the high combat efficiency which enabled his company to hold personnel casualties to a minimum while defeating a powerful hostile force."

DISTINGUISHED FLYING CROSS

SECOND LIEUTENANT ROBERT M. D'ARCY, USMCR:

"For heroism and extraordinary achievement while attached to a Marine aircraft group in aerial combat with enemy Japanese forces in the Solomon Islands area in September and October, 1942. On September 9, Second Lieutenant D'Arcy shot down an enemy twin-engined bomber and on October 11, while accompanying a flight of six planes over Japanese-controlled territory, he contacted a hostile force of twenty bombers and four fighters. Although his gasoline gauge showed empty, he stayed with his flight, and with utter disregard for his own personal safety, dauntlessly engaged the hostile aircraft, destroying a Japanese fighter plane. Finally, completely out of fuel, he skillfully landed on Henderson Field without damage to his plane. His outstanding ability and fearless devotion to duty were in keeping with the highest traditions of the United States Naval Service."

SECOND LIEUTENANT JOHN M. JONES, USMCR:

"For extraordinary achievement in aerial combat with enemy Japanese forces in the Solomon Islands area, while attached to a Marine aircraft group, September, 1942. Making his first contact with the enemy on September 2, Second Lieutenant Jones participated in an engagement with a Japanese force consisting of eighteen twin-engined bombers and twenty-two Zero type fighter planes and succeeded in destroying a Japanese bomber. On September 9, he took part in an attack against an enemy force of twenty-six twin-engined bombers and twenty escorting Zero fighters but failed to return from this flight. His skill and intrepid fighting spirit were in keeping with the highest traditions of the United States Naval Service."

AIR MEDAL

CAPTAIN BRUCE PROSSER, USMCR:

"For meritorious achievement while participating in aerial flight as leader of a four-plane division of a striking force of a Marine aircraft group in combat against enemy Japanese forces in the Solomon Islands area on September 11, 1942. Hampered by bad weather and low visibility during a night bombing mission, Captain Prosser became separated from the remainder of his group, but continued with his search and made contact with one enemy light cruiser and three destroyers. Repeatedly losing and regaining sight contact, he was forced, due to low clouds, to initiate the attack from below 2,500 feet, and despite heavy antiaircraft fire and the frantic maneuvers of the Japanese surface vessels to escape, he scored several near misses with probable underwater damage. His skill, tenacity of purpose, and indomitable fighting spirit were in keeping with the highest traditions of the United States Naval Service."

LETTERS OF COMMENDATION*

By The Commandant, USMC:

LIEUTENANT COLONEL LOUIS C. PLAIN, USMC.

By Commander, South Pacific Area and South Pacific Force:

CAPTAIN ROBERT F. CONLEY, USMCR.
MAJOR PAUL J. FONTANA, USMC.
CAPTAIN THOMAS E. MOBLEY, JR., USMCR.
CAPTAIN VERNON A. PETERSON, USMCR.
MAJOR MICHAEL SAMPAS, USMC.

*NOTE: The editor greatly regrets that space and paper shortage will not permit printing all citations and commendations in full.

First Division Citation

UNITS which comprised the First Marine Division, FMF, (Reinforced) in the Solomon Islands Area 7 August to 9 December, 1942, the period for which the Presidential Unit Citation was awarded:

First Marines (H&SCo; WpnsCo; 1st, 2nd, 3rd Bns.)
Fifth Marines (H&SCo; WpnsCo; 1st, 2nd, 3rd Bns.)
Seventh Marines (H&SCo; WpnsCo; 1st, 2nd, 3rd Bns.)
Eleventh Marines (H&SBtry; SplWpnsBtry; 1st, 2nd, 3rd, 4th Bns.)
Second Battalion, Seventeenth Marines.
First Engineer Battalion.
Division Headquarters Battalion (HqCo; 1stSigCo; 1st MPCo.)
First Service Battalion (HqCo; Serv&SupCo; "A" & "B" (Trans.))
First Medical Battalion (H&SCo; A-B-C-E Cos.)
First Amphibian Tractor Battalion.
First Special Weapons Battalion (H&SBtry; A-C-D-E Btrys.)
First Tank Battalion.
Battery "L" 155mm. Howitzer Battalion.
Second Marines (H&SCo; WpnsCo; 1st, 2nd, 3rd Bns.)
Eighth Marines (H&SCo; WpnsCo; 1st, 2nd, 3rd Bns.)
Tenth Marines (1st & 3rd Bns.)
Eighteenth Marines (B & D Cos.)
Second Medical Battalion (B-C-D Cos.)
Second Tank Battalion (B-C Cos.)
Company "A", Second Engineer Battalion.
Company "A", Second Amphibian Tractor Battalion.
Second Service Battalion (Cos. A & C. (Trans.))
First Parachute Battalion.
First Marine Raider Battalion.
Second Marine Raider Battalion.
First Aviation Engineer Battalion.
Third Barrage Balloon Squadron.
Third Defense Battalion (H&SBtry; 155mm. ArtyGroup; SplWpnsGroup; 90mm. Group.)
Fourteenth Defense Battalion (H&SBtry; 155mm. Group.)
Antiaircraft Group, Detachment "B", Fifth Defense Battalion.
Marine Corps Unit No. 290-A.
Sixth U. S. Naval Construction Battalion.
First Marine Aircraft Wing & Attached Army and Navy Units.
Btry "B", 259th C. A. Bn. (H.D.) U. S. Army.
Motor Torpedo Boat Squadron Three.
American Division, U. S. Army (as specified on covering letter).

Individuals, serving with the above-named units between the inclusive dates, are entitled to wear the Presidential Unit Citation Ribbon with one star. Those who have joined the organization since the above participation in the campaign are entitled to wear the ribbon without the star while serving with the organization mentioned.

MILITARY DIGEST

Pacific Strategy*

WHEN Douglas MacArthur speaks about Pacific war strategy, as he has recently, it is well to give the matter thought, since he is the outstanding figure in the Pacific arena and the leading exponent there of amphibious war. . . . MacArthur advocates surprise and the utilization of all forces, land, sea, and air. This is total amphibious war, the most deadly instrument in Allied hands if properly used, as it is in the Mediterranean today. MacArthur condemns eccentric movements, such as island hopping, which will not contribute to the main strategic purpose. Inferentially, this condemns all raids which are not made for the specific purpose of battering down and seizing the essential points necessary to the fulfillment of the grand strategy. But also inferentially it supports all operations made with this purpose in view. MacArthur's concepts of Pacific strategy and his use of amphibious war are sound.

There are four ways of approach to Japan itself. The first—and the one advocated by MacArthur—is north from Australia via the Philippines. From there the most obvious and natural route would be to China, utilizing its great manpower and well-located land air bases for the further advance north toward Japan. This plan has many advantages. At present it is the shortest and most direct road to the Philippines. It probably obviates the necessity of fighting for Formosa, which, with its large Chinese population, should pass into Allied hands much after the manner of Sardinia. Such a flank attack is the most direct method for cutting the lines of communication between Japan and her holdings south of Formosa. The short road from the Indian Ocean via the Strait of Malacca is closed until Singapore is recaptured, and the long frontal approach from Hawaii will not cut the Japanese lines of communication until the Philippines are recaptured. At present, only our submarines are operating against those lines, although they are doing a magnificent job. The second method of approach lies through Burma, Malaya, and Indo-China. This is an eccentric and not a direct approach to the heart of the problem. At best the Burma Road will hardly begin to supply China's needs, and to free the Strait of Malacca at least two-thirds of Sumatra and the nearby islands will have to be recaptured. If this plan further contemplates the immediate retaking of Java and Borneo, it is indeed an eccentric move. It would be better to by-pass them now, leaving them possibly to fall later by attrition as Kiska did.

The third approach is directly west from Hawaii. At present it is not as practicable from the supply standpoint as the route to Australia, running south of the chain of islands which extend east through the Fijis. But once the Philippines are recaptured, it becomes the shortest and best supply route for the Far East, provided the flanking nests of Japanese hornets are smoked out. With our increasing sea and air power, and the relatively small military forces required to occupy them this should not be an insuperable task, with this proviso—that it does not interfere with the direct move north from Australia, but complements it. There are no capacious harbors in the mid-Pacific to contain mass forces or adjacent islands from which the tactical land force can cover their movements. The northern approach from Australia has many. However, the mid-Pacific approach does have this temporary advantage: Until the Philippines are recaptured, seizure of the correct sites offers the best prospects for the strategic bombing of Japan itself. But this operation is subsidiary to and should complement, not interfere with, the main move north. The fourth approach via the Aleutians can be ruled out. . . . However, if Russia enters the Pacific war, the northern route will be the great air way for the intensive strategic bombing of Japan.

*By Admiral William V. Pratt in *Newsweek*, October 4, 1943.

Seawater for Drinking*

THE Naval Medical Research Institute at the Bethesda Medical Center, of which Captain William L. Mann is the Director, set itself the problem of making seawater drinkable by the shipwrecked. There were foreseen the needs of appliances of different capacities, one as the equipment of a life-boat or life-raft, the other an item of personal equipment. Progress on these appliances has advanced to the point where practical tests have proved their entire practicability. It may well be that production and distribution of this equipment may be going forward by the time these lines are printed.

Briefly the appliance consists of four plastic bags, and the process consists of precipitation first of the chloride content of the water and then of its alkaline element. A chemical is added to the seawater in the first bag, then the supernatant water is poured through a filter in the second bag. This desalinized water is subjected to a second chemical in the third bag and a potable water is poured therefrom into the fourth bag. The chemicals used in the process have not been disclosed.

Working under Captain Mann's supervision, the details of the process were worked out by Lieutenant Clare R. Spealman of the Naval Reserve. The successful completion of this research was made the subject of a congratulatory letter to Captain Mann and Lieutenant Spealman from the Surgeon General of the Navy.

The impact of war has always been a driving force in the prosecution of research. Always war accentuates some peacetime problems and calls for their immediate solution.

*Taken from *The Military Surgeon*, August, 1943.

The Luftwaffe's Last Stand*

ASSESSING the present strength of the German air force, the writer says: "Much of the Luftwaffe now lies on the junk heaps west of El Alamein and in Tunisia and Sicily. Some of it is at the bottom of the sea. Over the Straits of Tunis in one day alone our boys knocked down 74 Junkers 52s." But, says the writer with significance: "There is enough left of the Luftwaffe to continue resistance for some time to come. The German air force is numerically as strong as ever, and, in some categories, stronger. The only change in the past year is that the Allies have attained a numerical advantage over the enemy."

The writer says Goering is conserving the Luftwaffe's main strength for the defensive battle inside *Festung Europa*. His reasons for the recent decline: 1. Numerically superior forces confronted the German Air Force on all major fronts where the Luftwaffe is engaged; 2. Allied air production is in excess of German production; 3. The quality of German flying personnel is noticeably lower than a year ago; 4. German industry has shifted from bomber to fighter production—indicating acceptance of the Axis loss of initiative in the air; 5. Italian pro-

*Frank Gervasi in *Collier's*, October 9, 1943.

duction was materially reduced by Allied bombardment and can now be entirely discounted.

On the other side of the picture, the writer says the Allies must face these facts: 1. The Luftwaffe's front-line strength has increased; 2. There is no shortage of German pilots; 3. Germany could count on Italian airpower to the extent of 1,200 machines in all categories (this was before the change of Italy to the Allied side); 4. German production has increased steadily through the past two years, and 5. Germany's self-sufficiency within Fortress Europe is complete.

The writer makes the following prediction: "The Allies can (and probably will) upset Germany's calculations with a crushing blow. It is your reporter's considered opinion that before the snow flies, Germany's *Festung Europa* will be heavily assaulted in what will constitute not merely an air front, but a third land front of great proportions. This opinion is based partly on knowledge, partly on confidence in the strategic and tactical superiority of our military brains, and partly on the fact that the German superman has proved himself a colossal amateur in the employment of air weapons, the very ones with which he had hoped to conquer the world."

✦ ✦ ✦

Submarines Pacific*

AT THE TIME of Pearl Harbor, the U. S. Navy had only 111 submarines in service; 41 of those were first-line fighting craft, 9 were experimental ships, 37 were mass-produced S-boats, and the remaining 25 were World War I heirlooms. Furthermore, our submarine service had little fighting history, absolutely no tradition, and was regarded by the Navy, as well as the public, as being of negligible value in the war effort.

So it was, says Mr. Pratt in this history of the submarine service, that immediately after Pearl Harbor, Admiral Hart of the Asiatic Fleet had under his command 17 submarines. Of those, the *Sealion* was bombed out of usefulness at Cavite, and the remaining 16 put to sea. It was tough going for those subs in the early days of the war, and Mr. Pratt lists the various reasons why the submarines, at the beginning of 1942, could claim only 4 Japanese transports, a supply vessel, and a minesweeper sunk, with a destroyer and a transport as probables.

Mr. Pratt says the submarines began to fight their own war when Admiral Robert H. English was placed in command. Praising him for his training of the submarine personnel, his complete faith in the submarine as an invincible weapon of sea war, Mr. Pratt says: "From that moment, our submarine service was the great surprise of the war. It is not too much to say that the American submarines, more than any other factor, were responsible for placing the Pacific initiative in our hands . . . and changed the face of the war."

In the first eighteen month of the war, the submarine service –with something less than 1% of the Navy's personnel–sank 40% of the Japanese ships that went down. Mr. Pratt then gives a list of daring feats accomplished by some of the outstanding submarine commanders.

Of the men who comprise the submarine service, Mr. Pratt says: "It is a young men's club, made up of slightly introverted individuals, who like the close association, and whose youth and training permit them to respond quickly to stimuli. They are a quiet, studious, soft-spoken group, gifted with an acute sense of duty, tinged with irreverence." For instance: "We're having admiral's inspection tomorrow," one skipper is reported as informing his crew, "and I'm not worrying about the ship, but for God's sake, don't call me Al."

*Fletcher Pratt in *Harper's*, October, 1943.

BOOK REVIEWS

THE FRAMEWORK OF BATTLE. By Lieutenant Colonel John G. Burr, USA, Ret. New York: J. B. Lippincott Company. 254 pps. $3.00.

THIS book is designed to be a layman's guide to the techniques of warfare, but it contains much that is worth the study of all military officers who have not already devoted a great deal of time to the study of the subject. It attempts to reduce the subject matter to simple language, it presents the nine basic principles of strategy in a simple way and illustrates them by historical examples that are easily understood—and for the reader to enjoy himself while so doing. Unexpected and fascinating things happen in battles; therefore, the presentation of brief accounts are naturally interesting. The author further tries to enable the layman, by careful study of his book, to become his own "expert" so that he can interpret the daily war news and not be entirely dependent on commentators who are, usually, nothing but rank amateurs.

Near the beginning of the book, he explains the language of military command and then presents the foundations of strategy in an interesting manner by giving examples, illustrating its basic underlying factors. The first and most important point he takes into consideration is that of lines of communication which are the most vulnerable spot of any army. He shows that the aim of most battlefield maneuvers is to threaten the enemy's lines of communication and force him to fight under disadvantageous conditions. At the same time, one's own lines of communication must not be exposed. These lines of communication are more than lines of supply: they are lines of reinforcement and retreat and lines of information and command. They include not only armies in the field but nations, some of whom can be defeated by having their supply lines cut by blockade or otherwise.

Having thus determined what the general wants to do, the next problem is how to do it, which leads to the principles of strategy. Most of the book is devoted to their examination. The principles are skillfully handled in pairs and each one a group of three.

Initiative and *surprise,* or as the author puts it, "strike first and unexpectedly," are the first principles considered. Surprise, he points out, may be surprise in strength, surprise in point of attack, or surprise through treachery. These methods are examined and examples of the successful use of each are presented. The last of the three methods of surprise is well illustrated by the ambush of the British tank units at Knightsbridge by Rommel, who prepared a trap of a mass of antitank guns into which the British fell and were almost completely destroyed.

Mass and *mobility,* or "strike hard and swiftly," are next examined. As General Forrest put it "get there fustest with the mostest men." The author points out that there are four broad methods for putting mass into operation: concentration at the decisive point, reserves to apply the necessary added stroke, operating on interior lines, and using formations which will permit the quick assembling of a mass.

Under *Unity of command* and *simplicity,* or as the author calls it "too many cooks," he points out the dangers of councils of war and gives many interesting examples of how they lead to disaster. Conferences are most essential, but they must never be allowed to degenerate into a council of war nor permit the decision to be delayed until it is too late.

The three remaining principles, *coöperation, coördination,* and *communications,* or "teamwork," are the last to be considered. The first is the essence of military art in the large operations for, without full coöperation by all unit commanders, success can hardly be expected. Leaders must know where the supporting units are, coöperate with them, and know exactly what they are trying to do, and all must be given considerable latitude which makes coöperation all the more essential. Coordination must, of course, be effected by the high command. Communications become more and more essential and whole campaigns, such as Germany's defeat in the first battle of the Marne, may be lost by failure of it.

Having determined the principles of strategy, the author then presents several chapters on their application in battle. He shows that the great unknown element in war is the human being. The generals themselves are human beings as are those who help them and those who are pitted against them. Personalities of the high command of both the enemy and foe play a great part in success or failure. Every successful commander should make every effort to know the strong points or failings of his enemy opposite. Success of a general depends largely on his knowledge of war and his having the necessary information on which to base his plans.

The Framework of Battle is well illustrated with maps and drawings, showing how the principles of strategy have been applied in great battles. They are a great aid in visualizing the over-all picture of battles. The range of illustrations and examples extend from the time of Hannibal to Eisenhower. The book is recommended to all persons who care to obtain a better conception of tactics and strategy.

C. H. METCALF.

✦ ✦ ✦

THE BATTLE IS THE PAY-OFF. By Captain Ralph Ingersoll. New York: Harcourt, Brace and Company. $2.00.

THIS is not a long book; yet, in its well-written pages, the reader is picked up and transported right to the battlefield of El Guettar. For there is one characteristic of Captain Ingersoll's writing—his description is so graphic that he makes the reader go where he goes and see what he sees. Here is the story of one day and one part of the fight for North Africa. Yet here, too, is a book that tells you what it all must have been like and how it differed from fighting elsewhere in the world.

In private life, the editor of the newspaper, *PM,* Captain Ingersoll made a name for this type of descriptive writing with his eye-witness stories on the Battle of Britain and the Russian front. In *The Battle is the Pay-Off,* he continues his detailed reporting. Indeed, the reporting—despite the shortness of the book—is so detailed that a man may become a better soldier for the reading of it.

At El Guettar, Ingersoll saw the United States Army fulfilling the purpose for which it was created—defeating the enemy. He liked some of what he saw. "It is a good army," he writes. "Believe in it."

At El Guettar, Ingersoll saw some things to trouble him. No man to condone overconfidence or shiftlessness at home, he felt that even men in the armed forces needed to get angrier, to hate the enemy more, to realize even more the overwhelming importance of the fight upon Fascism and the almost-unbelievable viciousness of the enemy. Despite his admiration for the American Army, Ingersoll writes "I do not believe this is going

to be a short war." The reason is that the Germans are spiritually, morally, and physically committed to destroy us. We, so far, according to Ingersoll, are only physically committed to destroy them. There, he thinks, lies the measure of how far we have gone and how far we still have to go in the war.

To sum up, for graphic eye-witness description and for a fighting philosophy, *The Battle is the Pay-Off* is good reading.

GARDNER B. SOULE.

HOW THE ARMY FIGHTS. By Lowell M. Limpus. New York: D. Appleton-Century Company. 338 pp. $3.00.

THIS book is a comprehensive discussion of how the Army is organized, how it functions in battle, and how it meets its supply and logistic problems. The trained officer, who has had the advantage of higher military education, will find little new in it as it covers practically the entire range of our military education. For the civilian and the relatively untrained serviceman, it contains a mine of general information and is highly recommended for anyone desiring to increase his background knowledge in order to obtain a fuller understanding of the operations of our Army in this war. Although discussing, at times, very complicated problems, the author is able to present a clear simplified picture of the functioning of the Army in its many amplifications.

He covers all the weapons and the technique of their use, the tactics of the several arms, combined and joint operations, and even delves into the strategy involved. The book is up-to-date in that it presents the rapid changes in tactics and the conduct of war that are taking place at the present time. These changes are mostly the result of the speeding up of the movement of men and weapons on the battlefield. The chapter on "Old Strategy–New Tactics" is perhaps the best in the book. He puts great emphasis on team-work and the effects of stepping up the tempo of modern warfare. Yet he has no illusion that any particular arm is all-important. Moreover, the facts are explained with a vivid imagination and a very readable style.

The last part of the book is devoted to the related subject of the conduct of this war. A truly striking chapter of it is devoted to the author's estimate of the price we are paying for pacifism. His estimate of probable casualties chills one's spine. Hitler might have been stopped, but for pacifism, (1) at the cost of 200 lives in 1936 when the German Army entered the Rhineland, (2) at the cost of 2,000 lives when they invaded Austria in 1938, (3) at the cost of 200,000 lives when Hitler took Sudetenland in the fall of 1938. "The peace that was purchased in order to preserve 200 lives in 1936 will finally be paid for at the rate of 1,000,000 lives a year."

C. H. METCALF.

HIGHWAY TO TOKYO. By Joseph Rosenfarb. Boston: Little, Brown and Company. 117 pp. $1.25.

HIGHWAY TO TOKYO is a brief discussion of the complicated factors involved in attacking Japan by each of four routes to Tokyo which the author considers to be "through the Aleutians and Siberia, through the Pacific direct from the United States, through Burma and China, or through the islands of Australia." He discards the first as being impracticable, due to difficult flying conditions: an approach direct across the Pacific would end in the Japanese fleet avoiding action and our fleet would have to retire for more fuel oil; the approach through Burma and China would be slow and almost impossible for logistic reasons; he believes the approach northward from Australia and reëstablishing ourselves in the Philippines the most favorable–from there, we can cut all of the life-lines

of the expanded Japanese Empire. His discussions of the problems involved are generally sound although some of his conclusions about naval warfare may be questioned.

C. H. METCALF.

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SKYWAYS TO BERLIN. By Major John M. Redding and Captain Harold Leyshon, USAAF. Indianapolis: Bobbs-Merrill Co. 290 pp. $2.75.

TWO former newspapermen, both Public Relations officers with the U. S. Army's Eighth Air Force in England, tell the story of the bitter winter months in which American heavy bombers proved, according to Major General Ira C. Eaker, "that our bombers can penetrate in daylight to any target in Germany; that they can go alone, without benefit of fighter protection when necessary; that they can bomb their targets effectively and that they can come home . . . without suffering prohibitive losses."

This is not one of the flock of "expert" treatises that argue for this or that method of winning the war. It is a well written series of anecdotes, of personal narratives about the boys who sweated it out in the sub-zero stratosphere over France and Germany during "the winter experiment."

The lessons learned in this experiment, in which many of the principal characters of the book gave their lives, are being applied now through the roof of Hitler's European Fortress in round-the-clock raids that are pulverizing the Nazi war machine.

The authors of *Skyways To Berlin* are not really authors, but reporters—and good ones. The actual authors are the boys who did the fighting and the flying and lived to relate what they had seen and done.

The book is good reading if you like tales of courage and high adventure.

G. H. G.

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GENERALSHIP—ITS DISEASES AND THEIR CURE. By Major General J. F. C. Fuller. Harrisburg, Pa.: Military Service Publishing Company. 107 pp. $1.00.

PERSONAL LEADERSHIP FOR COMBAT OFFICERS. By Lieutenant Prentiss B. Reed, Jr. New York: Whittlesey House. 116 pp. $1.50.

WHILE *Generalship* was written a number of years ago, it has been recently republished in this country, and because of its keen analysis of the problems involved, it is worthy of consideration in our book review section. General Fuller's urge to write this study grew out of his own experiences in World War I in which he was convinced that generalship had reached a near all-time low. He believes very strongly in the moral leadership of generals and that they must have close personal contact with their command in order to exercise the leadership that is expected of them. Generalship, he believes, means, first of all, heroism which is "the soul of leadership."

The disease, according to his analysis, is that generals have become too much encumbered with colossal staffs and headquarters which tend to make them mere cogs in a machine. He emphasizes the point that the decisions and broad outlines of plans must be made by the general personally and not by his staff. Expertness in paper work does not constitute generalship. He puts a great emphasis upon the desirability of having youthful and vigorous generals. "A man who cannot think clearly and act rationally in the bullet zone is more suited for a monastery than for the battlefield."

General Fuller's remedy for obtaining better generalship is the more careful selection of officers for general's rank based

on physical condition, vigorous training, experiences in command, and the possession of the ability to think accurately and quickly under trying conditions. The staff, a part of generalship, must consider, too, its duty to extend beyond the planning of operations and must, like the general, get out with the troops to see that the plans are carried out correctly. The author puts great emphasis on the building up of the morale and fighting spirit of an army.

Personal Leadership for Combat Officers is designed for junior officers and noncommissioned officers. It presents a comprehensive framework for an officer's attitude and gives him a great deal about the methods of order used in doing his job. It is based on well established principles of personal control. It is briefly presented and designed to enable the young officer to run his job without approaching it from the realms of psychology, sociology, and ethics. C. H. METCALF.

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THE UNITED STATES NAVY. By Carroll Storrs Alden and Allan Wescott. New York: J. B. Lippincott Company. 452 pp. $5.50.

THIS is a revision of the text book used for a number of years at the United States Naval Academy. It is highly instructive and inspiring book, not only for the student of naval warfare but for the general reader as well. The book is remarkably well written: clear, forceful, and colorful in style. It has sound and ample background material for an intelligent study of the American Navy; against this background are given clear and logical discussions of the causes of all our wars. The book abounds in vivid descriptions of battles and campaigns; it gives fair criticism and evaluation of these movements.

The theme of the book is the important part played by our navy in war and in peace since colonial days; the navy in foreign wars; how brilliant victories, such as those of the War of 1812, have added much to national unity; the part the navy has played in diplomacy and in the promotion and protection of commerce; the vital importance of the navy in the saving of the Union during the Civil War.

The importance of coöperation between the land forces and the navy is a second fundamental idea of the book; the authors show the great results obtained when coöperation is present, as in the opening of the Mississippi during the Civil War; they show how disaster follows when coöperation is lacking, as it was at Santiago during the war with Spain.

The book has great value in that it leaves the reader convinced, thoughtful, and constructively critical. It makes one realize that we must have a clear-cut foreign policy—and that always backed by adequate force of arms; that our navy must be second to none and must always be able to do honor to its great traditions and colorful personalities of the past.

NELLIE HILL.

BEFORE BATAAN AND AFTER. A Personalized History of Our Philippine Experiment. By Frederic S. Marquardt. Bobbs, Merrill. $2.50.

THIS is a clearly-written history of the Philippines during the time the United States has been interested in the islands. The book starts with our war with Spain, and includes the unbelievable announcement by Governor General Basilio Agustin Pavila of 1898: "Between Spain and the United States of North America hostilities have broken out . . . the North American people, constituted of all the social excrescences, have exhausted our patience and provoked war. . . . The struggle will be short and decisive. The God of Victories will give us one as brilliant and complete as the righteousness and justice of our cause demand. . . . A squadron manned by foreigners, possessing neither instruction nor discipline, is preparing to come to this archipelago . . . pretending to be inspired by a courage of which they are incapable. . . ." The book ends with conclusions drawn from the Battle for the Philippines by the author, who points out that in contrast to Pavila's outburst in 1898, General MacArthur, when war came, commented only: "We shall do our best."

The author sees in the Filipinos, a freedom-loving, hard-fighting people. He does not believe Filipino guerillas will ever stop cutting Japanese throats. He sees in the American experiment in the Philippines a model for future rule and development in the Far East. He believes that in the education of long-subject peoples of the Orient—education for freedom—lies the hope for permanent peace in the Pacific.

GARDNER SOULE.

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STRENGTH FOR TODAY. New York: Thomas Y. Crowell Company. 366 pps. $1.00.

THIS little book, which can be conveniently carried in one's pocket, is laid out for a-page-a-day inspirational reading. The daily readings are mostly from the Bible. Scattered thoughts of philosophy, poems, etc., are interspersed.

C. H. METCALF.

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ARMORED WARFARE. By Major General J. F. C. Fuller. Harrisburg: Military Service Publishing Company. $1.00.

ARMORED WARFARE is one of the series of *Military Classics* published by the Military Service Publishing Company. It is an annotated edition of British FSR III and was first published in English in 1932. The author, even at that early date, foresaw much of what was to happen in the next war as a result of highly mechanized armies. His book was particularly well received by the Czechs, Germans, and Russians. Timoshenko ordered all of his officers to keep it available for any reference. C. H. METCALF.

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THE SHARPS RIFLE: ITS HISTORY, DEVELOPMENT, AND OPERATION. By Winston O. Smith. New York: William Morrow and Company, 1943. 138 pp. $3.00.

MR. SMITH has written a collector's handbook on the Sharps Rifle, describing the history of the manufacture of the rifle, the successive changes in models, and the improvements. He also includes a very pertinent chapter for the collector who wants to repair and operate old rifles in his possession. The book is illustrated with numerous plates and sketches of parts, models, and types of ammunition. This is the first

time that full information has been compiled on a weapon of almost equal importance to the Colt revolver in the western migration and the settling of the plains. P. S. C.

New Rifle Handbook

HOW TO SHOOT THE U. S. ARMY RIFLE. A Graphic Handbook on Correct Shooting. 122 pp.; illustrated; space for notes. Washington, D. C.: The Infantry Journal, Inc. Paper covered, 25 cents.

Here is a new and exceptionally clear guide to rifle marksmanship, equally valuable for training with the M1903 (Springfield), M1917 (Enfield), or the new M1 (Garand). This book was prepared by Lieutenant Arthur Goodfriend, AUS, with the coöperation of Gjon Mili and other photographers loaned by *Life* for the project. It is based upon doctrine and techniques developed at the Engineer School, Fort Belvoir, Virginia, and the Infantry School, Fort Benning, Georgia, under direction of Brigadier General C. R. Huebner, Director of Training. The result is a manual which, in text and especially in illustrations, is a distinct advance on previous manuals. The lessons in it, well learned, should lead many a Nazi and Jap to echo the words of a dying German in the last war: "God save us from these Americans. They shoot like devils. They are the best marksmen in the world."

Three Pictorial Guides

MECHANIZING OUR ARMY. By Lieut. Hugh Sears, AC, USA (Ret'd.). Illustrated by Robert Sherry. 64 pp. New York: Grosset & Dunlap. 50 cents.

OUR NAVY'S STRIKING POWER. By Leonard G. Winans. Illustrated by Robert Sherry, 64 pp. New York: Grosset & Dunlap. 50 cents.

WHAT'S NEW IN THE AIR CORPS? By Lieut. Hugh Sears. Illustrated by James Gary. New York: Grosset & Dunlap. 50 cents.

Brief pictorial guides to U. S. Army, Navy, and Air Forces equipment as it was at the time of our entry into the war. Nontechnical and elementary, with dramatic action drawings and simple text. Uniforms and insignia as well as guns, tanks, ships, and planes are illustrated. Good for your "junior commando" at home, or for quick and ready reference.

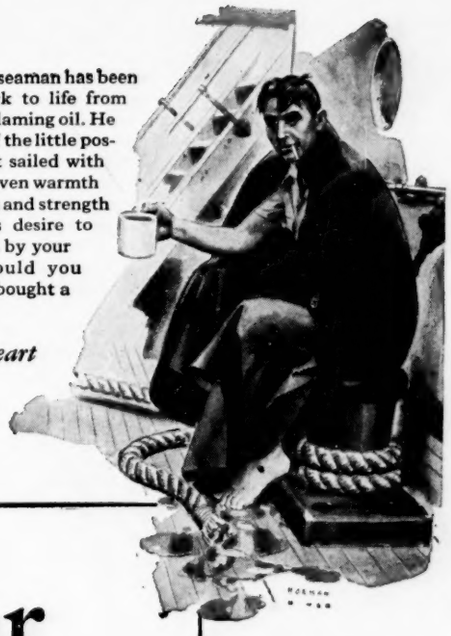
HE'S IN THE PARATROOPS NOW. By A. D. Rathbone, IV. Illustrated. 190 pp. New York: Robert M. McBride & Co., $2.50.

This is an excellent non-technical account of the selection, training, and intended use of paratroops in the U. S. Army and Marine Corps. The frontispiece shows a "typical representative of the United States Marine Corps paratroops," and many of the pictures were taken at paramarine training centers, while others were taken at Fort Benning and other army posts. The illustrations are excellent, and the text is both readable and instructive, so the book gives a very good picture of the training of this new and dramatic branch of warfare.

The book is one of a series dealing with the Army, Navy, Air Corps, submarines, and the armored force. We'd like to see a similar one on the Marines.

No, these are not Russian or Polish war orphans. They are right here at home. Their father, who was an automobile mechanic, is in Europe now, repairing American tanks. Their mother is in a war plant. Every night they sit here and wait her homecoming — and dinner. Your dollars can support playgrounds, equipment and care for them through one of your local welfare agencies. Would you rather have a new evening gown?

Let your heart decide



A merchant seaman has been dragged back to life from an ocean of flaming oil. He has lost all of the little possessions that sailed with him. He is given warmth and comforts and strength to fulfill his desire to "ship" again by your dollars. Would you rather have bought a new radio?

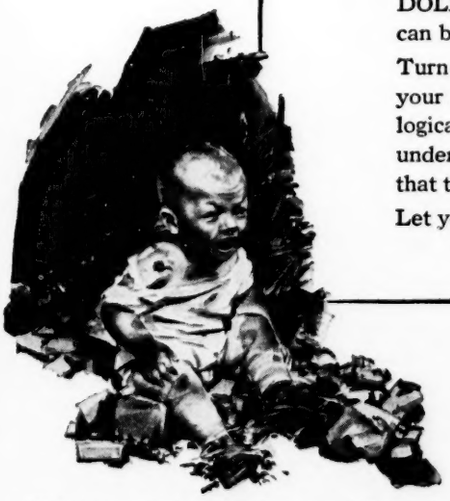
Let your heart decide

Let your heart decide

DOLLARS can be cold and selfish things. Or they can be generous, compassionate and merciful.

Turn over the spending of some of your dollars to your heart. It will want to give twice what your logical mind intended to give, because your heart understands the mercy, the relief and the pleasure that these dollars bring.

Let your heart decide.



This Chinese baby didn't have much, but yesterday it did have a straw shelter, a crude cradle and two parents to care for it. A screaming Japanese bomb destroyed them all. Your dollars can bring this baby back to a useful life in the new China to come. Would you rather have a new chair in the living room?

Let your heart decide

Remember this soldier? You saw him on the USO posters last year. His smile comes straight from a USO clubhouse. One of the finest things civilians have done in this war is in building and supporting the USO. Boys come into the army from farms and cities—a little lonely—a little homesick. The USO provides friendship, entertainment and hominess. Some of your dollars are spent through the USO. Would you rather have bought yourself a few theatre tickets?

Let your heart decide

Give ONCE for ALL these

USO
United Seamen's Service
War Prisoners Aid
Belgian War Relief Society
British War Relief Society
French Relief Fund
Friends of Luxembourg
Greek War Relief Association
Norwegian Relief
Polish War Relief
Queen Wilhelmina Fund
Russian War Relief
United China Relief
United Czechoslovak Relief
United Yugoslav Relief Fund
Refugee Relief Trustees
United States Committee for the Care of European Children

National War Fund

Give through your United Community Campaign

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